

# **Persuasive Advertising**

**Evidence-based Principles**

**J. Scott Armstrong**



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# PERSUASIVE ADVERTISING

*Evidence-based principles*

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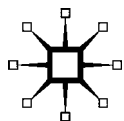
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palgrave  
macmillan



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Softcover reprint of the hardcover 1st edition 2010 978-1-4039-1343-2

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First published 2010 by  
PALGRAVE MACMILLAN

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Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

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ISBN 978-1-349-51189-1 ISBN 978-0-230-28580-4 (eBook)

DOI 10.1057/9780230285804

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

10 9 8 7 6 5 4 3 2 1  
19 18 17 16 15 14 13 12 11 10

*To my wife, Kay Anderson Armstrong.  
My shipmate, partner, and pal for nearly half a century so far.  
My work on this book was a test of her patience.  
For example, Persuasive Advertising traveled with us  
on all of our vacations over many years.  
Her career in social science research and her commonsense approach  
enabled her to make numerous improvements to this book.*

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# Contents

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<i>List of exhibits</i>	<i>ix</i>
<i>Preface</i>	<i>x</i>
<i>Acknowledgements</i>	<i>xi</i>
Introduction	1
Types of evidence	6
Conditions	14
The principles	25
Strategy	26
1. Information	27
2. Influence	63
3. Emotion	85
4. Mere exposure	98
General tactics	102
5. Resistance	103
6. Acceptance	143
7. Message	180
8. Attention	217
Media-specific tactics	240
9. Still media	243
10. Motion media	267
Creativity	278
Evaluating advertisements	287
Conclusions	293
Appendices	295
A Challenges to generalizing from experimental evidence	296
B Data on print ads from <i>Which Ad Pulled Best (WAPB)</i>	300
C Non-experimental data on TV commercials	302
D Prospect theory and persuasion	304
E Media allocation methods	305
F How to select an advertising agency	308
G Management presentations: An evidence-based checklist	311
H Written management reports: An evidence-based checklist	315
I Advertisingprinciples.com (AdPrin.com)	318



Glossary	319
References	325
<i>Name index</i>	<i>361</i>
<i>Subject index</i>	<i>377</i>
<i>Persuasion Principles Map</i>	<i>388</i>

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# Exhibits

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A	Types of evidence	12
B	Key areas of conditions	24
C	Categories of persuasion principles	25
Principles checklists:		
1	Information	62
2	Influence	84
3	Emotion	97
4	Mere exposure	101
5	Overcoming resistance	142
6	Acceptance	179
7	Message	216
8	Attention	239
9	Still media	266
10	Motion media	277
D	Developing and nurturing creativity: a checklist	286
E	Persuasion principles map	292

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# Preface

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*Advertising is fundamentally persuasion.*  
Bill Bernbach, 1960

*Persuasive Advertising* is a guide for all who create or evaluate advertisements—for people in advertising agencies and advertising research companies, for those who hire agencies, and for those in companies that do their own advertising. The basic proposition is that evidence-based advertising principles underlie persuasion. And experimentation is the bedrock of the knowledge about these principles.

To date, much of what is known about advertising has been hidden in obscure academic papers. The objective of this book is to put useful knowledge about persuasion into an understandable and easy-to-access format. Therefore, I use everyday language. For example, customers “think about a product” instead of “engage in cognitive processing of stimuli.”

Many of the principles have profound effects, some of which are counter-intuitive. At points in the book, you will have the opportunity to predict the outcome of some of the studies underlying the principles. I hope you will find much evidence that contradicts your current beliefs. Such evidence will be useful to readers who heed Winston Churchill’s warning, “Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.”

While typical practice and expert opinions are consistent with many of the principles, empirical evidence provides the most valuable support. This book draws upon thousands of research studies that reveal when the principles are most effective and how to apply them.

Understanding evidence-based principles can improve the ability of novices and experts to develop persuasive advertising. It will help advertisers appreciate the challenges that their advertising agencies face as well as contribute to good long-term relationships between sellers and buyers. As you will discover, some commonly accepted practices that appear to be persuasive could be detrimental in the long-term.

Each year advertisers spend enormous sums to market their products and services. Understanding and applying the *Persuasive Advertising* principles will enable them to accomplish the job of marketing more effectively and at a lower cost.



J. Scott Armstrong

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# Acknowledgments

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Gerry Lukeman, Chairman Emeritus, Ipsos ASI took an interest in the book starting in November 2006. Over the next three years, he guided me towards the interests of practitioners, provided access to unpublished findings from the files at Ipsos ASI, and greatly improved the organization and clarity of the writing. He was merciless when I lapsed into academic baffle-gab. He added examples and provided access to people in the advertising field. His contributions had a profound influence on the book.

Dr. Sandeep Patnaik, Research Director at Gallup & Robinson, took the lead in evaluating the principles by analyzing “quasi-experimental data” on tested print ads. We were initially uncertain about the value of this project. As it turned out, this original research proved to be immensely valuable. There was a close correspondence between the results of the quasi-experimental and experimental analyses.

The book also presents previously unpublished commercial research. Dave Walker, Senior Vice President, Global Research Director for Ipsos ASI, analyzed data from tested TV commercials. He also helped in summarizing the findings from these data.

Although I never met him, I owe much to David Ogilvy. He translated his knowledge into guidelines that were easy to use. In 1994, I started with Ogilvy’s guidelines and began the development of a decision-support system for advertising. This led to the conclusion that the guidelines needed to be refined so as to provide a more complete description of the actions that advertisers can take, as well as the conditions under which these actions apply. I refer to these as principles.

I tried to trace the historical development of the persuasion principles. When I discuss historical facts prior to 1930, it is safe to assume that they came from Presbrey (1929). Historical facts from 1930 onwards are from a variety of sources. In many cases, it was difficult to trace the stories to their origins. Many historical facts came from the Internet, often from a number of alternative sources, and these are not cited specifically.

Cynthia Cronin-Kardon, Jean Newland, and others at the Lippincott Library, University of Pennsylvania, tracked down papers no matter how obscure the source or how incorrect the citation. This involved well over 2,600 papers, which were then entered into a data-base, a task that relied on many, and in particular, Amelia Aldao, Michael Guth, Ankita Sancheti, Alexandra Yordanova, and Rachel Zibelman.

It was difficult to find research assistants who could understand academic papers enough to be able to summarize them in plain language. However, two were especially good at this: Lisa Negron and Zhen Chai.

Many academicians, including Andrew Abela, Willem Burgers, Peter Fader, Magne Jørgensen, Americus Reed III, Jenni Romaniuk, Brian Martin, Byron Sharp, and Brian Wansink provided useful suggestions on the content.

John A. Carstens spent more than four years with the writing, design, organization, and word processing, thus putting his years of teaching college composition and editing faculty papers to good use. He was also good at determining what I meant to say, which was sometimes different from what I said. He died in May 2006 and I miss him.

I drew upon knowledge from many fields. To ensure that this knowledge has been properly transmitted into principles, I, along with Amelia Aldao, April Anderson, Saurabh Bajpai, Michael Guth, Jim Liu, Rachel Zibelman, and Alexandra Yordanova, tried to contact all living researchers whose work is cited. My deepest appreciation to those people who came back with detailed suggestions for improvements. Shane Frederick, Richard P. Larrick, Daniel O'Keefe, and Rik Pieters were especially helpful in this effort.

In a further attempt to improve the accuracy and usefulness of the summaries of research, I asked various researchers to review some contentious sections. Reviews were provided by Charles Areni on "Questions," Pierre Chandon on "Product information," Jean-Charles Chebat on "Two-sided arguments" and "Indirect versus direct conclusions," Phil Gendall and Robert Schindler on "Pricing," Sheena Iyengar, Cassie Mogilner, and Benjamin Scheibehenne on "Product choices," Ekant Veer on "Cause-related marketing," Patti Williams on "Mere exposure," and Eric S. Knowles on "Resistance."

My commissioning editor at Palgrave Macmillan, Stephen Rutt, read early drafts and provided suggestions on how to make the book useful to practitioners.

Many people helped with editing as the manuscript progressed through more than 270 revisions. April Anderson, Stuart Halpern, Bryan La France, Soo Lee, and Jen Zhao went through the whole book and provided wonderful suggestions.

Others helped to improve clarity by commenting on sections of the book. A partial list includes Zain Akbari, Adam Altman, Jennifer Armstrong, Dessa Crawford, Ishika Das, Sarah Fastabend, Max Feldman, Deborah Fox, Lela Jacobson, Julie Johnson, Kelly Xiayu Jin, Allen Jun, Cindy Kim, Marian Lee, Elena Liao, Diana Lin, Douglas Martin, Mariam Rafi, Eleanor Segal, Andrew Snyder, Shara Vanetia-Walerstein, Alex Wilson, Dara Yang, and Jennifer Yoo.

As we neared the final draft, Alice Barrett Mack went through the book and did a superb job of editing. Susan Curran did a great job on editing and design.

I received guidance from advertisers, including Tony Adams, a consultant and formerly an advertising executive at the Campbell Soup Company; W. Warren Armstrong of Armstrong Marketing Services; and Ralph Day, a consultant.

Charles Smolover, a creative director at the Mangos advertising agency in Malvern, Pennsylvania, encouraged me to read the classics in advertising early on in this venture. He also provided excellent advice on how to organize and present the material to make it more useful to advertisers.

Jesse Engle convinced me to write this book and he helped in the early stages.

Kesten C. Green of Monash University in Australia, and my closest research colleague over the past decade, offered excellent advice at various stages in this project.

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# Introduction

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*Advertising is the very essence of democracy.  
Anton Chekhov, late 1800s*

*[Advertising is] interpreting to the public, or to that part of it which it  
is desired to reach, the advantages of a product or service.  
American Association of Advertising Agencies, 1918*

In July 2001, I visited the American Advertising Museum in Portland, Oregon. When visiting museums, I am often excited by the progress they reflect. But after thinking about the exhibits in this museum, I concluded that little progress had been made since the 1960s with respect to persuasive advertising.

Many people share the belief that practice of advertising is stagnant or deteriorating. An examination of 38 public opinion surveys from the 1930s through the 1970s showed that responses to questions such as “how believable (truthful) (informative) are ads?” reflected positive attitudes toward advertising through the mid-1950s, reaching an eight on a nine-point scale. However, by the 1970s, the ratings had plummeted to below three (Zanot 1984). Judging from reviews of consumer surveys, the general sentiments towards advertising have remained unfavorable in recent decades (Gaski & Etzel 2005).

Advertising experts also believe that advertising has worsened. In 1991, David Ogilvy said, “Who is approving this junk called advertising? Have the clients gone crazy?” Graham Phillips, former CEO of Ogilvy and Mather, said in *Advertising Age* (May 20, 2002, p. 26): “Too much of today’s advertising is irrelevant and a waste of money. Ten years ago, some observers noted that ad agencies seemed ‘more interested in selling their product than the client’s product. Since then, it has gone from bad to worse.” Tellis (2004, p. 29), a marketing professor, concluded, “Much advertising, as preached today, is ineffective.”

Many believe that advertising is an art that changes with the times. As a result, they believe that what was learned in the past has little relevance to advertising today. Fox (1997), an advertising historian, wrote: “Advertising practitioners, in blithe, traditional ignorance of their trade’s history, have continued to rediscover and rename old techniques (and imagine they have thereby come up with something unprecedented).”

## A broad view of what constitutes persuasive advertising

*Every one is practicing oratory on others thro the whole of his life.  
Adam Smith*

This book takes a broad view of advertising. It considers actions intended to

influence others through all types of media—including TV, radio, direct mail, magazines, billboards, and the Internet.

The principles in the book relate to attempts to persuade in many forms, with or without the motive of financial gain. The principles can be applied to a broad range of activities, including but not limited to selling products, gaining votes, helping to pass legislation, obtaining support for causes, and convincing people to avoid behaviors that are self-destructive or detrimental to others. They extend beyond advertising per se. In sum, the principles apply whenever there is a need to persuade someone to do something.

How big is the persuasion business? One admittedly crude estimate was made in the paper titled “One quarter of GDP is persuasion” (McCloskey and Klammer 1995).

## Evidence-based principles

*The application of the principles and methods of psychology to advertising was a need which was felt by all [advertising leaders].*  
Walter Dill Scott, 1912

Prior to about 1940, if you had a disease, it made little difference what doctor treated you. The treatment of diseases is so complex that doctors, who had to rely on experience, were able to learn little about how to treat diseases. Then things changed. Why? – Because the discipline of medicine began to use the findings from experiments to develop principles for treating patients. The change was gradual, but today many medical schools embrace the teaching of evidence-based medical principles. Thanks to the Internet, doctors can find evidence-based treatment principles on sites such as Cochrane.org. Patients can also go to such sites to find out what treatments are relevant given their symptoms. As a result, people’s lives are now much longer and suffering has been reduced (Gratzer 2006).

Management is far behind medicine. Managers rely on gut feelings and experience rather than evidence. This applies especially to advertising. Randall Rothenberg, an advertising expert at Booz Allen Hamilton (personal communication, December 14, 2006), wrote that, “Having spent the past seven years in management consulting, I’ve found myself stunned by the degree to which agencies’ continual search for ‘the new’ has them ignore otherwise articulated bodies of knowledge.”

Although an enormous amount of useful research has been produced in management, it has not been translated into useful principles, or even into plain English. However, after a century-long accumulation of empirical knowledge—and the advent of the Internet—management is able to begin the transition to comprehensible evidence-based principles. By increasing the attention to evidence-based findings, *Persuasive Advertising* seeks to advance the science of advertising.

## Formulating the principles

In formulating the principles, I used the systems approach. That is, I am interested in seeing how a principle affects not only the seller, but also the buyer and

other stakeholders. In addition, I am concerned about long-term implications. For example, deceptive practices may be profitable in the short run but are unlikely to be profitable in the long run. Conversely, short-run practices that lose money, such as making good on guarantees, might be profitable in the longer run. In other words, because I used the systems approach in the formulation of evidence-based principles, they offer opportunities for advertisers to improve the effectiveness of their advertising in delivering long-term benefits for sellers and customers.

Ideally, principles should apply across time and space. Does anybody believe that because Newton's law of gravity was discovered long ago it is irrelevant today, or that because the discovery occurred in England it does not apply in the United States? The principles in this book are drawn from research conducted over more than a century and in many countries. Dave Walker, who has conducted statistical analyses of advertisements worldwide, has concluded that the principles he has examined apply across countries (Walker 2008).

Basic books in a field should summarize the principles for that field. In the social sciences, however, they rarely do, even when they claim to have done so. For example, we (Armstrong & Schultz 1993) examined nine basic marketing textbooks, published between 1927 and 1989, to determine whether they contained useful marketing principles. Some of the book titles included the word "principles." Four doctoral students acted as coders and found 566 principles related to product, price, place, or promotion. None of these principles was supported by empirical evidence. Four raters agreed that only 20 of these 566 principles were meaningful. Twenty marketing professors rated the 20 meaningful principles as to whether they were correct, supported by empirical evidence, useful, and surprising; none met all the criteria. Finally, the professors judged nine of the 20 principles to be nearly as correct when their wording was reversed.

The evidence presented in *Persuasive Advertising* is drawn from about 640 papers and 50 books. These sources were themselves based on prior publications. There were 33 meta-analyses covering almost 1,800 studies. There were also many traditional reviews citing hundreds of studies. In all then, *Persuasive Advertising* rests on a foundation of approximately 3,000 research sources.

The studies were conducted in the fields of accounting, behavioral economics, cognitive psychology, consumer behavior, language, law, marketing, mass communication, organizational behavior, politics, propaganda, social psychology, and public opinion. This search for evidence was aided by excellent books including the following:

### **Books summarizing research findings**

Cialdini (2009), *Influence*

Dillard and Pfau (2002), *The Persuasion Handbook*

Levine (2003), *The Power of Persuasion*

Lynch and Horton (2009), *Web Style Guide*

Knowles and Linn (2004), *Resistance and Persuasion*

Messaris (1997), *Visual Persuasion*

O'Keefe (2002), *Persuasion: Theory and Research*

Petty and Cacioppo (1984), *Attitudes and Persuasion*



Pratkanis and Aronson (2000), *The Age of Propaganda*  
 Rossiter and Bellman (2005), *Marketing Communications*  
 Rossiter and Percy (1997), *Advertising, Communications and Promotion Management*  
 Stiff and Mongeau (2003), *Persuasive Communication*  
 Tellis (2004), *Effective Advertising*  
 Zimbardo and Leippe (1991), *The Psychology of Attitude Change and Social Influence*

Without the numerous review papers, this book would not have been possible. For example, Grewal et al. (1997) reviewed 77 studies on comparative advertising. When such reviews were available, I relied on them rather than going to the original sources (a decision made after calculating my expected lifespan).

Social scientists often cite research that they have not read, with the result that incorrect quotations are propagated throughout research studies. For example, by examining a sample of 50 papers that cited one paper, we found that 95 percent of those did so incorrectly (Wright and Armstrong 2008). To put you at ease on this, I hereby certify that I have read all of the relevant sections of the books and articles that I cite in this book.

To help ensure that the academic papers were summarized accurately, my research assistants and I attempted to contact all of the researchers whose work is cited in this book. We sent e-mails to each author we could locate, with my summaries of their research, and asked whether I had summarized their findings faithfully and whether I had missed any relevant studies. In cases where authors did not respond, we sent a follow-up e-mail. This process lasted several years. I estimate that we reached about 80 percent of the authors. Some of the authors were deceased and we were unable to locate others. Of those we were able to contact, over 90 percent responded. In most cases, the authors agreed with the summary of their work. In many cases they offered useful corrections, added to the clarity of the summary, and suggested additional research studies.

The book also presents previously unpublished research on the effectiveness of various principles for TV advertising. Dave Walker at Ipsos ASI conducted these analyses.

Sandeep Patnaik and I conducted original research for this book to provide additional evidence on the effectiveness of various principles. These analyses were conducted on print ads that had been tested by Gallup & Robinson.

### Presenting the principles

I have tried to translate the research findings into everyday language. Here is an example I encountered in one of the papers I cited for this book: “Interestingly, increases in set incidence entropy and increases in verbal incidence entropy were associated with lower miscomprehension levels (Beta = -0.2103 and -0.3669, respectively).”

I do not report statistical significance. After wading through the literature on the value of significance testing and doing my own analyses, I concluded that tests of statistical significance are detrimental to the advancement of knowledge

(Armstrong 2007a, 2007b). They are also detrimental to decision-making (e.g. see Hauer 2004). In my work on this book, I found no case in which statistical significance tests played a useful role in the development of an advertising principle and many cases where they were misleading. For a review of the history and evidence on the use of tests of statistical significance, see Ziliac and McCloskey (2008).

The book is organized so that relevant principles can be located quickly via end-of-chapter checklists. In addition, the Glossary explains some of the important terms that are frequently used in this book. The references are linked to the pages on which they are discussed. There is a map of the principles and a guide to the checklists on the inside back cover. Finally, subject and name indexes are provided.

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# Types of evidence

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Casual observation provides the weakest type of evidence. Non-experimental data improves upon casual observation, but it is a poor guide, especially in complex situations. The primary focus in this book is on experimental evidence. The types of evidence are described in this section.

## Casual observation

*If you believe that you can only learn from experience, how can you learn that you can't?*  
Anonymous

Casual everyday observation can only provide useful evidence in simple situations when feedback is clear and frequent. Unfortunately, there are few situations like this in advertising. Let me state that another way: Given the complexity of advertising and the difficulty on getting good feedback, experience provides a poor way to learn how to persuade people through advertising. However, we all believe that this rule does not apply to us.

Typical practice is based primarily on casual observation by advertisers. I refer to this type of evidence as “received wisdom,” and draw upon it in the book when empirical evidence is lacking, the situation is simple, or the principle is obvious. Received wisdom is useful for such situations.

I relied on many sources related to typical advertising practices. These six books were especially useful: Presbrey (1929), *The History and Development of Advertising*; Mayer (1958), *Madison Avenue USA*; Pope (1983), *The Making of Modern Advertising*; Goodrum and Dalrymple (1990), *Advertising in America*; Mayer (1991), *Whatever Happened to Madison Avenue*; and Fox (1997), *The Mirror Makers*.

Casual observation falls short when advertisers do not have or use accurate, timely, well-summarized feedback about the outcomes of their procedures relative to alternatives. Additionally, knowledge based on typical practice is ineffective when many conditions are involved. It becomes too difficult to determine how each condition relates to the effectiveness of an advertisement.

Finally, typical practice can suffer when short-term success conflicts with long-term results. For example, advertisers might learn that a specific practice in a given campaign is effective in increasing short-term sales. However, determining whether that practice improves long-term profits and customer relationships is more difficult.

Experts draw upon their experience. In addition they may learn from experimental evidence published in journals or in-house studies. I found expert advice to be useful in formulating the principles. These nine books were particularly valuable: Scott (1912), *The Theory and Practice of Advertising*; Starch (1914), *Advertising*; Hopkins (1923), *Scientific Advertising*; Reeves (1961), *Reality in Advertising*; Ogilvy (1983), *Ogilvy on Advertising*; Antin (1983), *Great Print Advertising*; Franzen (1994),

*Advertising Effectiveness*; Roman, Maas and Nisenholtz (2003), *How to Advertise*; and Sutherland and Sylvester (2000), *Advertising and the Mind of the Consumer*.

Beware that experience tends to reinforce beliefs even when the beliefs are wrong. This applies to experts in many fields. For example, in one experiment, clinical psychologists were asked to examine information about individuals to identify which were homosexual and which were heterosexual. Data were contrived so that there were no relationships among the variables. Nevertheless, the experts saw the data as supporting the relationships they expected to see. When the clinicians were presented later with valid information about the relationships, they did not use it because it conflicted with their beliefs (Chapman and Chapman 1969). Advertising experts are also prone to this problem. If they think that an advertising technique will work, their experience is likely to confirm this belief.

Using one's judgment to develop principles in situations that involve several conditional factors is also difficult. For example, some experts have concluded that humor harms persuasion, while others have concluded the opposite. As it turns out, research has shown that the effectiveness of humor depends on the conditions—under some conditions it helps and under others it harms.

Another problem with relying on experts is that they often overlook conditions when giving advice. For example, Ogilvy (1985, p. 75) said, "When you put your headline in quotes, you increase recall by an average of 28%." In research that I conducted with Sandeep Patnaik, we discovered that this increased recall was due to the use of testimonials—not quotation marks.

## Empirical evidence

When situations are complex, empirical research is needed to identify how conditions affect the outcomes of various actions.

The dangers of complexity can be illustrated by an example from medicine. In 1847, Ignaz Semmelweis observed that the obstetric clinic of a hospital that was served by doctors had three times the mortality rate of a "lower-class" clinic, which was served by midwives. Given the many factors involved, it required much research to determine the cause—which was that the doctors were coming into the obstetric clinic after having performed various procedures and their hands contained germs. Semmelweis concluded that they should wash their hands prior to each procedure. However, his findings were met with skepticism. Despite his scientific publications, it was years after his death that hand washing gained acceptance. Typical practice and expert opinion failed in this life-and-death situation involving hand washing. You might ask whether this would happen in advertising.

Let's look more closely at the types of empirical evidence: non-experimental, quasi-experimental (meaning partly experimental), and experimental.

### Non-experimental data

You have seen thousands of advertisements for analog watches in your lifetime. Do you know what time is typically displayed on the watches in the ads? When

I have asked my people this question, approximately 10 percent give the correct answer.

Systematic observation and record keeping can greatly improve the ability to learn. Certainly it is more effective than casual observation. For example, if you record the time shown in the next few watch ads you see, you'll quickly learn that almost all watch ads show the same time.

Non-experimental studies are most useful when studying simple situations—that is, the relationship depends upon few conditions. Sometimes even a single condition can obscure the effects of a persuasive technique.

In reasonably simple situations, where there is ample data, it is sometimes possible to use statistical procedures to control for some conditions. For example, analyses of extensive records kept in baseball and football have shown that coaches' guidelines (e.g., go for a field goal on fourth down when inside the opponent's 10-yard line) often conflict with those based on empirical studies of what is best. Surowiecki (2004) reports that some football coaches benefit from analyses of non-experimental data. Lewis (2003) describes how analyses of non-experimental data have aided decision-making in baseball. The 15 National Basketball teams with at least one full-time statistician on their staff won 59 percent of 962 games to date in 2009–10, while the 15 teams with no statisticians won only 41 percent of 958 games (David Biderman, *Wall Street Journal*, March 12, 2010).

However, in complex situations, non-experimental data can be misleading. Consider another example from medicine. In a former British colony, healers believed that a distillation of fluids extracted from the urine of horses, if dried to a powder and fed to older women, could preserve youth and ward off a variety of diseases. The preparation became popular and non-experimental studies using hundreds of thousands of older women showed that those who took the drug were healthier.

The former colony is the United States; the time was the latter part of the 20th century and on into the 21st century; the drug is a female hormone-replacement, such as Premarin. Women who were diligent about their health issues sought the best care on all types of problems. These non-experimental studies compared them with women who put less emphasis on taking care of their health. Thus, the non-experimental analysis of data misled doctors. This ended only when experimental studies were done. These experiments suggested that long-term use of the horse-urine extract did not help older women: worse, it seemed to cause tumors, blood clots, heart disease, and perhaps brain damage (Avorn 2004). In short, non-experimental studies can mislead people in complex situations.

Non-experimental data analyses have proven useful for assessing advertising principles that involve only one or two minor conditions, especially when they have a strong effect, such as the use of a “brand-differentiating message.” However, analyses of non-experimental data suffer from the same problem that was noted in the studies of female hormone replacement drugs. Namely, the more informed advertisers are aware of expert advice and they may employ a set of recommended procedures, some of which are of no value, but, as they are used along with procedures that do matter, they appear to help. Based to some extent on my research

for this book, I have become skeptical about the value of non-experimental data in complex situations.

Non-experimental data are often used by advertisers. For example, a study by Ogilvy and Raphaelson (1982) used responses from viewers of 951 TV commercials analyzed by the Mapes and Ross research firm. This approach took a giant step forward thanks to Stewart and Furse's (1986) analysis of 1,059 TV commercials that had been tested by Research Systems Corporation (RSC). It used before and after viewer responses from many thousands of viewers to assess the effects of over 160 features of commercials on recall, comprehension, and persuasion. It examined such data for 356 brands from 63 firms in 12 product categories. It was a massive undertaking. Their study inspired further studies of tested TV commercials, including Stewart and Koslow (1989), with an additional 1,017 commercials from RSC; Laskey, Fox and Crask (1994), with an analysis of data on 1,100 30-second commercials for fast-moving food and household items; Stanton and Burke's (1998) analysis of 601 commercials; Phillips and Stanton's (2004) analysis of 5,000 commercials; and Walker's (2008) analysis of 1,513 commercials that had been tested by Ipsos ASI.

At first glance, the findings from these studies seem disappointing. Few variables mattered. Why was that? The primary reason is that different approaches to advertising are used in different situations. Another reason is that there are an enormous number of conditions, and what works under some conditions may be harmful in others. As a result, what seem to be large sample sizes of over 1,000 commercials and a vast number of viewers were woefully inadequate. Massive sample sizes would be required so that the analyses could be done for ads facing similar conditions. In short, as a general strategy for learning how to persuade through advertising, the analysis of non-experimental data falls short. However, this was in itself an important finding. The analysis of non-experimental data has been widely used in advertising, and there are studies showing that even when done on a large scale by highly competent researchers, the findings can be misleading.

Another important conclusion is that for simple situations, the non-experimental findings to date have been useful. In this book, I have limited the discussion of non-experimental data to situations with few conditions. These findings are useful where experimental data are lacking. Even then, I advise caution. We conducted an analysis of 24 principles where non-experimental data seemed relevant and where we had experimental evidence. The findings from the non-experimental analyses agreed with those from the experimental data on 67 percent of the principles (Armstrong and Patnaik 2009). Better than chance (50 percent), for sure, but obviously calling for caution.

Non-experimental findings, when relevant, are provided at the end of each section on evidence. The reports are brief. Those who are interested in details can find them in the annotated references for the cited authors as well as in the original studies.

I believe that non-experimental studies have outlived their value for advertising. We currently have an immense body of knowledge. Non-experimental research that is not designed to build on this knowledge is unlikely to lead to

advances. In particular, stepwise regression and data mining offer little hope. Fortunately, we know what works: experimentation. So let's look at that next.

### Quasi-experimental data

I use the term “quasi-experimental” to represent an approach where the research design controls for some, but not all variables, in comparisons of different ways of advertising. For example, a quasi-experimental study might compare two ads for the same product, brand, and media. The disadvantage is that some factors are not held constant. Nevertheless, the quasi-experimental approach can be valuable to the study of persuasive advertising even though, on occasion, an uncontrolled variable might impinge on validity.

Our quasi-experimental analysis drew upon data on 240 pairs of print ads from the *Which Ad Pulled Best* series (Burton and Purvis 1987...). Those books provide full-page magazine ads that had appeared from the 1980s up through 2002. I refer to them as “WAPB analyses.” The ads had been tested for recall, and in some cases for persuasion, by the advertising research firm, Gallup & Robinson. Our coding of these ads was done without any knowledge of the effectiveness of the ads. The approach is briefly described in the Glossary and a more detailed discussion is provided in Appendix B. Such analyses are reported for 58 principles in this book.

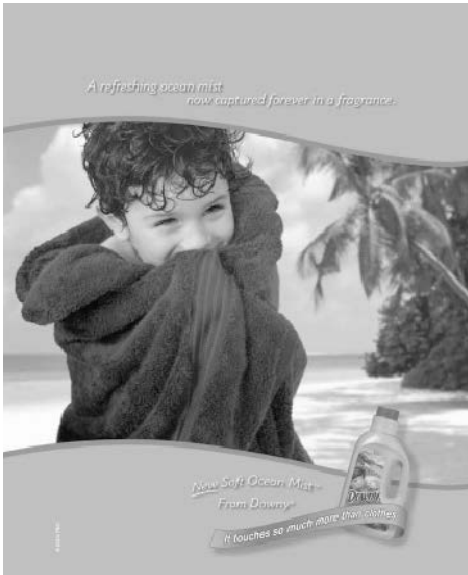
We searched for pairs where one of the ads follows a principle and the other ad does not. A typical pair of advertisements is shown opposite.<sup>1</sup> For example, to test the principle on whether the headlines mention the brand, we compared the recall score for the ads that followed the principle (ad B in this case) with the score from those that did not (ad A). Note that while the ads are for the same brand, there are many differences, such as ad A having poorer contrast between the text and the background than ad B, and ad B also having more specific benefits. We then compared the scores for all ads that followed the given principle with those that did not. In this case ad B's recall was much better than that for ad A, 29 percent to 19 percent. By averaging across all pairs of ads that differ on this principle, we can assess the effect of putting the brand name in the headline.

The findings from the quasi-experimental analyses are valid. We were astonished to find that the directional effects of quasi-experimental findings in *Persuasive Advertising* agreed with those from the experimental evidence that was available. This applied to all of the 26 principles for which we also had lab experiments and all seven principles for which we also had field experiments (Armstrong and Patnaik 2009).

Given this high level of validity, we gained knowledge on 58 of the advertising principles. We also have confidence in the principles for which the quasi-experimental analyses provided the only experimental evidence.

These analyses also contributed to the formulation of the principles. Here is an example. Experts suggested that headlines should be short. But our analysis of quasi-experimental data from WAPB indicated that the number of words made little difference. Which viewpoint was correct? Sandeep Patnaik and I re-

1 Used with the kind permission of P&G.

Sample ad pair from *Which Ad Pulled Best***A**

A refreshing ocean mist now captured forever in a fragrance.  
New Soft Ocean Mist from Downy  
It touches so much more than clothes

**B**

Get in the mood with new Downy simple pleasures  
Essences of water lily & jasmine  
Essences of vanilla & lavender  
Essences of morning glory & honeysuckle  
Introducing a new collection of fabric softeners from Downy with blends of essences and natural essential oils  
An everyday simple pleasure for your clothes ... and your mood.

examined quasi-experimental data on tested print ads. We believed that a key condition had been overlooked: namely, whether the ad is for a high-involvement product (where the customers give much thought) or for a low-involvement product. By comparing ads separately for each group, we found that ads for low-involvement products were more effective with short headlines than long ones, while ads for high-involvement products were more effective with longer headlines.

### Experimental data

In experimental studies, the values of all key causal variables are controlled. For example, an advertiser (or researcher) who wants to know whether humor is persuasive creates two identical ads except that one version is humorous and the other is not. The ads are shown to similar people (assigned by a random procedure) in identical situations, and their reactions, are recorded. This is the most effective way to assess the effects of principles.

Experimental evidence comes in two types: laboratory experiments and field experiments. The former allows for tighter control, while the latter are more realistic.



Some people believe that laboratory studies (which will simply be referred to as lab experiments for the rest of this book) cannot be used to generalize to real-world problems. To address this issue, leading researchers were asked to compare findings from laboratory experiments with those from field experiments in 11 areas of human and organizational behavior; the findings were similar (Locke 1986). In addition, an analysis of 40 studies on sources of communication found similar effects from field and laboratory studies (Wilson and Sherrell 1993).

Exhibit A provides a summary, starting with the weakest evidence and moving toward the strongest. The weak forms are adequate only for the principles that have few conditions and where advertisers receive good feedback on effects.

The best evidence—and the source of much of the evidence provided in this book—is the meta-analysis, which involves a formal collection and analysis of all relevant evidence on a given principle, especially when the evidence involves laboratory and field experiments. Meta-analyses provide full disclosure on how the researchers searched for studies, coded the results, and summarized the findings. Findings from meta-analyses are more valid than those from traditional reviews (Beaman 1991). The meta-analyses are of particular value when the conditions are well specified.

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**Exhibit A Types of evidence (listed from weak to strong)**

Casual observation

- Typical practice
- Expert advice

Empirical evidence

- Non-experimental data
- Quasi-experimental data
- Experimental data
  - Lab experiments
  - Field experiments
- Meta-analyses of experimental findings

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Not all principles are based on evidence. Some seem so obvious that no one has bothered to study them. An example of an obvious principle from another area is “ensure that the computer is plugged in before calling tech support.” I provide some obvious principles because they are an important part of the checklist. For example, I have seen ads that, by mistake, omit critical information about how to obtain a product or when an advertised event will take place.

The book is organized so that you can easily skip the evidence as these sections are flagged by sub-titles. But I do not advise doing that, especially if a principle conflicts with your beliefs – and some will. It is not wise to change one’s opinion without seeing the evidence.

The various studies can help you to understand how to apply the principle to a given situation. They allow the reader to see the nature and strength of the evidence for each principle. Some of the studies might be of particular relevance to your problem, so I provide the sources. In doing so, *Persuasive Advertising* follows a convenient academic convention: author name and publication year,

such as “(O’Keefe 1999),” typically placed at the end of the description of the evidence. Thanks to the Internet, the studies are easy to track down. For example, most papers are in full text on the Internet so that one only needs to enter a few words from the title into a Google Advanced Search.

## Barriers to the use of evidence-based principles

A survey of 40 respondents from the ten largest advertising agencies in Norway found that these advertisers were largely ignorant of the research literature on advertising (Helgesen 1994). For example, none of the advertising agencies vying for Subaru’s U.S. account used prior research on advertising in their proposals (Rothenberg 1994).

Advertisers might question the value of using findings from empirical research, preferring instead to rely on their judgment. Of course, there are potential problems with all experiments. Here are some criticisms that seem plausible but have little relevance for the findings described in this book:

- Convenience samples (e.g., students or customers in mall intercepts: that is, those approached while on shopping expeditions) are used as subjects in nearly all studies.
- Subjects try to help researchers confirm their hypotheses.
- Some studies are too old.
- Most findings are just common sense.

In Appendix A, I explain why you should ignore these arguments.

However, keep the following in mind. First, only a small percentage of relevant studies in advertising look at behavior, and, second, many advertising studies are one-shot efforts. That is, they have not been replicated or extended.

Why do so many advertisers ignore the research on advertising? Here are some valid concerns:

- *Relevance*: Even if advertisers have easy access to a research library, they must comb through a vast body of literature to identify useful findings. To make matters worse—as I found in preparing this book—probably less than 5 percent of journal articles on advertising contain useful findings.
- *Replication*: Only a small percentage of the studies in advertising have been replicated, thus posing a question about their reliability. For that reason, *Persuasive Advertising* relies primarily on studies that have been replicated. Fortunately, given the thousands of published studies, there were many studies that were replicated or extended.
- *Bafflegab*: Many academics write in a manner that is nearly incomprehensible. Thus, many relevant studies needed to be “translated.”

There are good reasons then, that advertisers have not capitalized on the extremely valuable evidence that has been accumulated.

In this book, my aim is to provide easy access to the world’s storehouse of empirically validated knowledge on how to persuade through advertising.

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# Conditions

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In the late 1800s, John E. Powers, a noted advertiser, recognized the importance of conditions—although he did not specify them. He said an appeal that worked well for one advertiser in a given situation might fail when used by another advertiser. For example, one would not use the same appeal for inexpensive grocery items as for high-priced goods valued for their workmanship. This book provides enough detail about the conditions to permit the reader to apply principles sensibly, whatever the circumstances happen to be.

Principles are action steps to be taken under given conditions. Conditions refer to the way in which one describes and defines the advertising problem being considered. This includes issues such as the objectives of the campaign, the nature of the product, and the target market.

Experts have often provided advertising principles that they claimed apply in all situations. Example: “Do not use humor in advertising.” In fact, principles that apply to all situations are rare—and humor is no exception.

Experts criticized Apple’s “1984” ad, perhaps the most famous TV ad, for violating many guidelines such as failing to identify the brand early. But when I rated the commercial using the principles in this book, the actions were consistent with the conditions. For example, because there was extensive media coverage leading up to the airing of the commercial, there was no need to mention the brand name early in the commercial.

The task of identifying the conditions for each principle was difficult because academic researchers often fail to describe conditions. This is not unique to studies of advertising: In a study of 1,700 empirical papers in six leading marketing journals from 1984 to 1999, we found that only 11 percent had hypotheses that included conditions (Armstrong, Brodie, and Parsons 2001). Fortunately for the purposes of this book, it was often possible to infer conditions.

Some conditions are necessary—otherwise the principle does not apply. For example, “Provide news, but only if it is real.” In such cases, the condition is stated as part of the principle. A helpful condition is not necessary, but, when present, the principle is expected to have a stronger effect. For example, “News is especially persuasive when it relates to important benefits for customers.” A harmful condition, on the other hand, reduces or even reverses the effectiveness of a principle when it is present. For example, the principle “Make the brand name prominent” will have little value if the brand is unknown, and it would be harmful when the brand has a poor reputation. When there are helpful or harmful conditions, I discuss them after presenting the principle.

There are three important and overarching conditions that I will now describe: the advertisers’ objectives, product offerings, and target markets.

## Objectives

*Don't care how bright or how catchy ... nor how much general interest.  
The key is "does it sell?" What's the profit of the ad investment?  
L. Thomas of Lord and Thomas, the largest U.S. ad agency in 1905*

The development of an effective advertising campaign should begin with a meaningful, complete, and clear statement of objectives. Although this might seem obvious, advertisers often plunge ahead without knowing what they want to accomplish. This happens even with prize-winning campaigns where the submission form had asked that the objectives be stated.

In one study, 68 entries in the print-ad classification from the annual Business/Professional Association Gold Key Awards were examined. Those who participated had been asked to include a statement of objectives and a summary of results. Two judges independently evaluated the entries' objectives. None of the entrants specified the desired effect of the campaign in measurable terms or the time frame to achieve it. In addition, the assessments were seldom related to the statement of objectives; for example, of those entries stating that an objective was "to increase purchase rate," only 12 percent measured purchase rates (Hartley and Patti 1988).

In another study, the 43 winners of the EFFIES<sup>1</sup> were asked to share copies of their entries and 29 responded. The intent of the awards is to evaluate the effectiveness against the company's objectives. Despite this criterion, of the 167 objectives stated by the winners, only 17 percent were measurable (Moriarty 1996).

Although there is much to admire in the bi-annual *Advertising Works* of the U.S. Institute of Practitioners in Advertising (IPA), the statements of objectives of the award-winning campaigns often fall short. As an example, consider this IPA submission by Levi Strauss for the objectives of its jeans campaign in Europe in 1988: a) maintain and increase brand share, b) maintain the 501 brand's price premium, c) introduce and establish pan-American advertising support in Spain, and d) achieve the above using TV advertising (Baker 1993). Their "objectives" did not specify profits and timing. They do not take account of all stakeholders. They are not measurable. And they confuse strategies with objectives.

The statement of objectives is largely up to the advertiser to develop. The agency can contribute, but the responsibility falls on the advertiser. I suggest that you ignore mission or vision statements. As you will see, they typically fail to use evidence-based procedures for setting objectives.

### Relevant objectives

*Our job is to sell our clients' merchandise ... not ourselves.  
Bill Bernbach*

The objectives of an advertising campaign should be relevant to the ultimate objectives of the organization. One way to identify ultimate objectives is to keep asking "why?" until it is no longer sensible to ask. For example: Why would you want to increase market share?

1 Effectiveness awards by the New York Chapter of the American Marketing Association.

For most companies, the ultimate objective for advertising should be to have a good return on the investment in the advertising campaign. One should also consider the impact of advertising on other stakeholders, such as creditors, employees, customers, suppliers, and retailers.

Advertising can lead directly to sales. It can help also with related sales efforts—such as making potential customers more receptive to sales calls. It can stimulate other behavioral changes, such as voting, protesting, or donating time and money to charitable causes. A 1906 ad by the American Civic Association, headlined “Niagara Falls will be Destroyed,” was instrumental in saving the Falls. In June 1966, ads by the Sierra Club stymied the U.S. government’s plan to dam the Grand Canyon (Glatzer 1970).

Advertising can be used to maintain loyalty by encouraging customers to resist switching to a competitive product. The notion of building brand loyalty was popular in the early 1900s and has grown substantially since then (Pope 1983). A Tareyton cigarette campaign of the 1960s, “I’d rather fight than switch,” illustrates this type of advertising.

Much advertising is done to help customers feel better *after* they have made a purchase. It can provide reassurance that the purchase was a good one. It can also help manage customer expectations regarding the benefits offered because customers often overestimate the pleasure they will receive from new purchases.

Advertising can also produce benefits for employees. For example, consumer banking revenues at the Halifax, one of Britain’s largest banks, had been slipping during the 1997–2000 period. To let customers know about its benefits (higher interest rates and friendly service) and to motivate its employees, the bank involved its employees in a “Staff as Stars” ad campaign. Over 1,000 employees auditioned for parts in the ads, and the bank built the campaign around 20 finalists. The campaign, which won an IPA Effectiveness Award, motivated employees and attracted new business (Rimini 2003).

When the ultimate objectives are specified, one can then specify relevant sub-objectives. This process requires much care and thought because managers have a tendency to inject sub-objectives that are not relevant to the ultimate objectives.

Do not confuse strategies with objectives. Unfortunately, statements of objectives for advertising campaigns often focus on strategies, such as increasing awareness or informing people about a new feature. Some managers are more comfortable specifying how to do tasks than explaining why the task needs to be done. In World War II, Willy Messerschmitt, the German aircraft designer, put this issue perfectly: “You can have any combination of features the Air Ministry desires, so long as you do not also require that the resulting airplane fly.”

Likeable ads represent a strategy, not an objective. While many successful ads are likeable, many are not. For example, comparative ads and those based on fear, guilt, or provocation are sometimes very effective though not likeable. Because of its potential misuse as an objective, my advice is that advertisers should not ask whether customers or experts or clients like an ad. This conflicts with current practice. A U.S. survey showed that 73 percent of advertisers and 53 percent of advertising agencies use ad likeability as an objective (Cook and Dunn 1996).

The Advertising Research Foundation claimed that ad likeability is the single best copy-test predictor of campaign success. However, I have not been able to find experimental evidence to support this belief (nor were Bergkvist and Rossiter 2008). The value of ad likeability is conditional on the situation, and it makes no sense to use likeability as an objective. Rosser Reeves said, “Liking be damned.”

In discussing objectives, *The Handbook of Advertising* advised that, “Establishing market share and increasing market share, then, are the 21st century touchstones by which a company gauges the effectiveness of its advertising” (Lewis and Nelson 1999, p. 172). But is market share relevant as an objective in business? Consider the following situation:

You are the marketing manager of a manufacturing firm known as “Big Guys Incorporated.” You are responsible for all marketing decisions and strategies, including the pricing structure of the firm’s products.

Recently your company introduced a new, highly technical product, and you have been asked to set the pricing strategy for this product. You are aware that your main competitor, “Other Guys, Inc.,” intends to introduce a product that is very similar. You should assume that the competitor’s product is as good as yours in every way that is important to the market, and the market is the same for both products. Therefore, the pricing strategy that you must formulate for your product should take into account this competitive force.

You are essentially faced with the choice between two strategies.

*Low price:* keep your price low, which causes your competition to suffer a substantial loss.

*High price:* choose a higher price that produces higher profit for your firm, but which also allows the competition to prosper.

You then calculate the present value of the total profits expected for your firm over the next five years, as well as for the competitors (“Other Guys”). You determine the following results for both strategies:

Firm	Expected profits over 5 years in US\$ million	
	Low-price strategy	High-price strategy
Big Guys	40	80
Other Guys	20	120

At this point you must choose your strategy, either a low price or a high price. Which strategy would you choose, a low price or a high price?

The above description is one of a series of lab experiments. In all, 1,016 subjects (management students from various countries) made pricing decisions using variations of the above situation. When information about the competitor’s profits was provided, over 40 percent of the subjects ignored the ultimate objectives (that is, maximize profits) and instead chose a strategy designed to beat or harm the competitor. Furthermore, in a field study that examined the performance of 20 large U.S. firms over a half-century, those with competitor-oriented (market-share) objectives were found to be less profitable and less likely to survive than those whose objectives were directly oriented to profits (Armstrong and Collopy