

THE NATIONAL BESTSELLER

WHY WE BUY



The Science of Shopping

UPDATED AND REVISED
FOR THE INTERNET, THE GLOBAL
CONSUMER AND BEYOND



PACO
UNDERHILL

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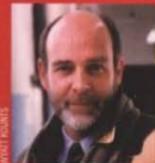
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The new *Why We Buy* is an essential guide—it offers advice on how to keep your changing customers and entice new and eager ones.



PACO UNDERHILL is the founder and CEO of Envirosell, Inc. His clients include Microsoft, McDonald's, adidas, and Estée Lauder. He is a regular contributor to *The Wall Street Journal* and *The New York Times*. He lives in New York City.



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and
*Why We Buy***

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Why We Buy

THE SCIENCE OF SHOPPING

*Updated and Revised for the Internet,
the Global Consumer and Beyond*

Paco Underhill





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DEDICATION

Who knew when the first keystrokes of this document were made in the spring of 1997 that ten years and twenty-seven foreign translations later this book would still be alive? I am grateful that in the summer of 1999, when this book came out, my father, Francis Underhill, got to see it. I don't think he really knew what I did even after reading it. He had a lot of interests, but shopping wasn't ever among them. He died that fall. I was there. I made him a martini and helped him get comfortable in bed. He went, sleeping next to my mother, his wife of more than fifty years. I still talk to him.

AUTHOR'S NOTE

For some of you, the book you hold in your hands may be an old friend—given as a gift, bought in an airport, secured through Amazon or assigned at a school or training program. Thanks for picking it up again. Most volumes stocked in the business section of a bookstore have a short shelf life. They zoom and crash and are forgotten within a year. This book has lasted ten years and is available in twenty-seven foreign editions. I had no idea when pen first went to paper back in 1997 that my story would appeal to so many readers.

From Russia to Japan, from Spain to Thailand, I've had visits and e-mails from readers just wanting to say hi, many looking for a job and not a few telling me their own stories. University professors from China, a Marxist minister in the Bengali provincial government, a jewelry designer from Spain—the list goes on. My favorite pieces of correspondence came from a man who ran a septic tank cleaning business in Missouri. The letter was handwritten on lined paper. I don't know how many letters that man writes a year, but I know I was privileged to get one of them. He'd read the book and wanted my advice on what color to paint his truck.

In 2007, I reread *Why We Buy* and realized that parts of the story had progressed and that some of the examples I'd used were dated. The book needed freshening and that's what it's gotten. If you liked it the first time, you'll like it even better the second. If you're picking it up for the first time, whether you love or hate shopping, this is a good, entertaining read, and you'll never look at the world of shopping and consumption the same way again.

Paco Underhill

January 2009

CONTENTS

INSTEAD OF SAMOA, STORES: THE SCIENCE OF SHOPPING

1. A Science is Born	3
2. What Retailers and Marketers Don't Know	28

WALK LIKE AN EGYPTIAN: THE MECHANICS OF SHOPPING

3. The Twilight Zone	42
4. You Need Hands	50
5. How to Read a Sign	61
6. Shoppers Move Like People	77
7. Dynamic	89

MEN ARE FROM HOME DEPOT, WOMEN ARE FROM BLOOMINGDALE'S: THE DEMOGRAPHICS OF SHOPPING

8. Shop Like a Man	102
9. What Women Want	121

10. If You Can Read This You're Too Young	137
11. Kids	151

IV**SEE ME, FEEL ME, TOUCH ME, BUY ME:
THE DYNAMICS OF SHOPPING**

12. The Sensual Shopper	171
13. The Big Three	194
14. Time	201
15. Cash/Wrap Blues	208
16. Magic Acts	213

V**SCREEN SAVERS, JET LAG AND WHIRLING DERVISHES:
THE CULTURE OF SHOPPING**

17. The Internet	227
18. Come Fly with Me	254
19. Windows of the World	268
20. Final Thoughts	280

<i>Acknowledgments</i>	293
------------------------	-----

<i>Index</i>	299
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**Instead of Samoa, Stores:
The Science of Shopping**

ONE

A Science Is Born

O_{kay, stroll, stroll, stroll . . . stop.}

Shhh. Stay behind that potted palm. Get out your clipboard and pen.

Our subject is the fortyish woman in the tan trench coat and blue skirt. She's in the bath section. She's touching towels. Mark this down—she's petting one, two, three, four of them so far. She just checked the price tag on one. Mark that down, too. Careful—don't get too close—you don't want her to see you. She picked up two towels from the tabletop display and is leaving the section with them. Mark the time. Now, tail her into the aisle and on to her next stop.

Thus begins another day in the vineyards of science, specifically the science of shopping. But let's start by addressing a fundamental question: Since when does such a scholarly discipline even exist?

Well, if, say, anthropology had devoted a branch of itself to the study of shoppers *in situ* (a fancy Latin way of saying shoppers *out shopping*), interacting with retail environments (stores, but also banks and restaurants), the actual, physical premises, including but not limited

to every rack, shelf, counter and table display of merchandise, every sign, banner, brochure, directional aid and computerized interactive informational fixture, the entrances and exits, the windows and walls, the elevators and escalators and stairs and ramps, the cashier lines and teller lines and counter lines and restroom lines, and every inch of every aisle—in short, every nook and cranny from the farthest reach of the parking lot to the deepest penetration of the store itself, if anthropology had already been studying all that . . . and not simply studying the store, of course, but what, exactly and precisely—scientifically—human beings do in it, where they go and don't go, and by what path they go there; what they see and fail to see, or read and decline to read; and how they deal with the objects they come upon, how they *shop*, you might say—the precise anatomical mechanics and behavioral psychology of how they pull a sweater from a rack to examine it, or read a box of heartburn pills or a fast-food restaurant menu, or grab a shopping basket, or react to the sight of a line at the ATMs . . . again, as I say, if anthropology had been paying attention, and not just paying attention but then collecting, collating, digesting, tabulating and cross-referencing every little bit of data, from the extremely broad (How many people enter this store on a typical Saturday morning, broken down by age, sex and size of shopper group?) to the extremely narrow (Do more male supermarket shoppers under thirty-five who read the nutritional information on the side panel of a cereal box actually buy the cereal compared to those who just look at the picture on the front?), well, then, we wouldn't have had to invent the science of shopping. In 1997, when this volume was originally written, the academic world knew more about the marketplace in Papua New Guinea than what happened at your local supermarket or shopping mall. Twentieth-century anthropology wasn't about what happened in your backyard.

In 1997, I'd been fighting for what I knew was right for more than ten years—and since then, a whole lot has changed. Companies across the world are now employing anthropologists to staff what have been popularly titled shopper and consumer insight groups. Ethnologic studies (that is to say, a science that breaks down humans into races, cultures and their various obvious and not-so-obvious characteristics) are part

of mainstream market research. But when I first hung out my shingle, my academic colleagues thought I was selling out, and the marketers and merchants I sought to serve looked at me as an alien from a distant planet.

Down the hall from my office then and now is an equipment room with more than one hundred cameras. Eight-millimeter video cameras, direct to hard drive, digital, even a few ancient Super 8 time-lapse film cameras. To keep track of them, every camera is assigned a name—the video cameras are named after rock stars, the digital stills are signs of the zodiac. We find giving a camera a name rather than a number helps it last longer, and when Jimi Hendrix feels poorly, he gets to the shop faster than if he were camera number 26. In that same equipment room are piled cases of blank eight-millimeter videotapes, two hours per tape, five hundred tapes to a case. Across the world, we have now shot more than fifty thousand hours of tape per year. We also have dozens of handheld computers, or PDAs, on which we painstakingly jot down the answers from the thousands of shopper interviews we conduct; there are laptops in there, too, plus all manner of tripods, mounts, lenses and other camera accessories, including lots of duct tape. Oh, and many well-worn hard-shell cases for everything, because it all travels. A lot. The studio next to the equipment room has two complete digital editing suites and eleven stations at which to watch all those tapes—because everything we shoot, we look at. We have more than enough gear in that room to make broadcast-quality documentaries and, while we're at it, to equip a good-sized university's school of social anthropology or experimental psychology, assuming the university has a deserved reputation for generating tons of original research gathered from all over the globe.

Even with all that high-tech equipment, though, our most important research tool for the past thirty years remains the piece of paper we call the track sheet, in the hands of the individuals we call trackers. Trackers are the field researchers of the science of shopping, the scholars of shopping, or, more precisely, of *shoppers*. Essentially, trackers stealthily make their way through stores following shoppers and noting everything they do. Usually a tracker begins by loitering inconspicuously near

a store's entrance, waiting for a shopper to enter, at which point the "track" starts. The tracker will stick with the unsuspecting individual (or individuals) as long as he or she is in the store (excluding trips to the dressing room or the restroom) and will record on the track sheet virtually everything the shopper does.

Befitting a science that has grown up in the real world, meaning far from the ivory towers of academia, our trackers are not stamped from the usual researcher mold. In the beginning we hired graduate environmental psychology students, but we found they were often unsuited to the work—more often than not, they came to the job burdened with newly learned textbook theories they wished to prove or disprove. As a result, they didn't possess the patience necessary to watch many shoppers at great length to see what they actually do. Creative people, however—playwrights, artists, actors, novelists, a puppeteer—have proven to be perfect for this work. They have no theories to uphold or demolish, just open minds and boundless curiosity about what people do and how and why they do it. They are dispassionate yet avid observers with no agenda except for wanting to accurately document how human behavior plays out in the retail arena. They manage to see the forest, the trees and everything in between.

When we find someone with the temperament and the intelligence for this work, we first put them through a training session in our office. There's a lot to learn—how do I watch and simultaneously take notes, for instance, or how can I tell whether someone is reading a sign or just staring at the mirror next to it? We have to teach the most important tracker skill of all: How do I stand close enough to study someone without being noticed? Because it's crucial to our work that shoppers don't realize they're being observed. There's no other way to be sure that we're seeing natural behavior. Fact is, we're all still surprised by how close you can stand to someone in a store and still remain invisible. We find that positioning yourself behind the shopper is a bad idea—we all pick up on the sensation that we're being watched. But if you stand to the side of a shopper, his or her peripheral vision reads you as just another customer—harmless, in other words, and barely worth noticing. From that position you can get close enough to see exactly what

a shopper is doing. You can be sure that he's touched, say, nine golf gloves, not eight or ten. Then we throw the tracker-hopefuls out into the real world, into a store setting, to see them in action. Most of them wash out at this point—you can teach technique, but not the smarts or the slight case of fascination required to do this work well. It's weirdly addictive, and many of our trackers have been with us for a decade or more.

John has been doing fieldwork for my company, Envirosell, for more than ten years, in between working as a kindergarten teacher. Trained to monitor five-year-olds, does he have patience? Oh, yeah. He also just completed his two-hundredth fieldwork assignment. He's of medium height, with brown hair, a spare build, crinkles in the corners of his eyes and big broad feet. He has no trouble standing all day. In our tracker pool, we also have rookies who are still getting twenty trips under their belts, intermediate-level trackers, master trackers, team leaders . . . and Noah, who, after thirteen years of tracking and team leading, now directs the forty-plus members of our tracking staff based out of our home office in New York City. We found Noah in Nashville. He was a last-minute replacement, a struggling music student who three hours into the job had found his calling. The first time he walked into my office he was dripping with nervous sweat (he'd never been to New York before). Thirteen years later, I still can't break him of the habit of calling me Mr. Paco.

In addition to measuring and counting every significant motion of a single shopping trip, our trackers also have to contribute incisive field notes describing the nuances of customer behavior and make good inferences based on what they've observed. These notes add up to yet another, this time anecdotal, layer of information about a particular environment and how people use it. Our trackers crisscross this continent, as well as the globe. As of 2008, we have offices in Mexico City, São Paulo, Milan, Bangalore, Moscow and Tokyo, and each office has its own tracker pool. All across the world, Envirosell trackers spend more time in stores in a month than most people do in several years. They visit every kind of retail business imaginable, from banks to fast-food restaurants to high-end fashion boutiques to hangar-sized discounters.

Since 1997, we've worked hard to expand our repertoire of field sites, adding concert halls, stadiums, train stations and airports as well as libraries, museums, hotels and websites (more about those later). But our sweet spot remains what we've always done. Of the world's fifty largest merchants, we've worked with approximately half, and in the U.S. alone, our clients include more than a third of *Fortune* magazine's top one hundred corporations.

As for the forms our trackers use? They're also marvels of data gathering. They have evolved constantly over the three decades we've been doing this research and are, without a doubt, the key to the entire enterprise, a great achievement, if I may say so, in the art of information storage and retrieval, nondigital division. We have tried scanning systems, exotic software packages . . . and we keep going back to the same old system. It works, it's flexible, and thanks to Wite-Out and a copy machine, it can be changed on a dime and on the fly. Our ability to react to what and whom we find walking through the door of wherever location we go is critical to our success. I'd guess that at least one third of the time we go on location, we end up finding something very different than what our client told us we'd find. The store has six aisles and not seven, the shelf layout has been mysteriously reversed or that interactive machine we were hired to study arrived at the store nearly a month ago and hasn't worked since.

Our earliest track sheets were able to record maybe ten different variables of shopper behavior. Today we're up to around forty. The form is reinvented for every research project we undertake, but typically it starts with a detailed map depicting the premises we're about to study, whether it's a store, a bank branch, a parking lot (for a drive-thru project) or just a single section—even just one aisle—of a store. The map shows every doorway and aisle, every display, every shelf and rack and table and counter. Also on the form is space for information about the shopper (sex, race, estimate of age, description of attire) and what he or she does in the store. Using the system of shorthand notation we've developed over the years, a combination of symbols, letters and hash marks, a tracker can record, for instance, that a bald, bearded man in a red sweater and blue jeans entered a department store on a

Saturday at 11:07 A.M., walked directly to a first-floor display of wallets, picked up or otherwise touched a total of twelve of them, checked the price tag on four, then chose one, and moved at 11:16 to a nearby tie rack, stroked seven ties, read the contents tags on all seven, read the price on two, then bought none and went directly to the cashier to pay. Oh, wait, he paused for a moment at a mannequin and examined the price tag on the jacket it wore. We'd mark that down, too, just as we'd note that he (the man, not the mannequin) entered the cashier line at 11:23 and exited the store at 11:30. Depending on the size of the store and the length of the typical shopper's stay, a tracker can study up to fifty shoppers a day. Usually we'll have several trackers at a site, and a single project may involve the simultaneous study of three or four locations. For huge stores like a home improvement center or a mass merchandiser, we may put ten or twelve trackers on the floor.

By the end of a job, an incredible amount of information has been crammed onto those sheets. They come back to the office, where an experienced clerk spends another day or so typing all the information, every single notation on every track sheet, into a computerized database. Over the years, we've spent tens of thousands of dollars and countless frustrating hours with computer programmers, trying to come up with a database that could handle the kind of work we do. The big problem is that while we crunch the same numbers in the same ways from job to job, each project usually requires us to do something a little differently—to collect different kinds of data or to devise new comparisons of facts we just uncovered. We've hired fancy consultants who spend six months at a crack with us, trying to build us a computer system. They ask us to list everything we want our program to do, but every week we add six new things to the list that negate all their work from the previous month. And of course, our turnaround time has to be swift, so there's no time to change the system completely for each job—we may need to do one new comparison for a project today and then not have to perform that function again for seven months.

In the early '90s, Microsoft Excel came along. Where had it been all my life? It was designed as a spreadsheet program, intended for accountants to do the relatively simple calculations they require. But

Excel's beauty was its open architecture—you could get in there under the hood and tinker, soup it up, make it purr. It also had a fairly simple way of writing macros, or lines of code, that allowed you to make the alterations easily. Today, while we still use Excel, we've moved on to other programs like Access and SPSS—but for years, Excel made our work possible. It's as though Microsoft built a very nice bicycle, which we then turned into a data-busting all-terrain vehicle. When Microsoft became a client and we showed them what we'd done with Excel, they were amazed.

When the videotapes come back from the sites, it's someone else's job to screen every bit of footage. Depending on the size of the store, we may have ten cameras running eight hours a day trained on specific areas—a doorway, for example, or a particular shelf of products. The video produces even more hard data. If, for example, a client wants us to determine in part how a particular cash register design affects worker fatigue, we may use the video and a stopwatch to time how long it takes for a clerk to ring up a sale at ten A.M. as compared to four P.M.

The list of particulars we're capable of studying—what we call the "deliverables"—grows with every new project we take on. At last count, we've measured close to a thousand different aspects of shopper-store interaction. As a result of all that, we know quite a few facts about how human beings behave in stores. We can tell you how many males who take jeans into the fitting room will buy them compared to how many females will (65 percent to 25 percent). We can tell you how many people in an IBM employee cafeteria read the nutritional information on a bag of corn chips before buying (18 percent) compared to those lunching at Subway (2 percent). Or how many browsers actually buy computers on a Saturday before noon (4 percent) as opposed to after five P.M. (21 percent). Or how many shoppers in a mall housewares store use shopping baskets (8 percent), and how many of those who take baskets actually buy something (75 percent) compared to those who buy without using baskets (34 percent). And then, of course, we draw on all we've learned in the past to suggest ways of increasing the number of shoppers who take baskets, for the science of shopping is, if it is anything, a highly practical discipline concerned with using

research, comparison and analysis to make stores and products more amenable to shoppers.

Because this science is being invented as we go along, it's a living, breathing field of study—meaning we never quite know what we'll find until we find it, and even then, we sometimes have to stop to figure out what it is we're seeing. Yes, for a lot of work now, after more than thirty years we have a good sense of what we are going to find, but what makes the science of shopping interesting is that things change and we still get surprised. I like to think of retail as the dipstick of our evolution. As we change as a species, those changes show up both in how we shop and what we shop for. That said, there are constants that relate to what we are biologically, and much of this book is about those constants.

For example, we discovered a phenomenon that journalists love to report—what's become known as the "butt-brush" effect—completely as the result of a happy accident. As part of a department store study, we trained a video camera on one of the main ground-floor entrances, and the lens just happened also to take in a rack of neckties positioned near the entrance, on a main aisle. While reviewing the tape to study how shoppers negotiated the doorway during busy times, we began to notice something weird about the tie rack. Shoppers would approach it, stop, and shop until they were bumped once or twice by people heading into or out of the store. After a few such jostles, most of the shoppers would move out of the way, abandoning their search for neckwear. We watched this over and over until it seemed clear that shoppers—women especially, though it was also true of men, to a lesser extent—don't like being brushed or touched from behind. They'll even move away from merchandise they're interested in to avoid it. When we checked with our client, we learned that sales from that tie rack were lower than they expected from a fixture located on a main thoroughfare. The butt-brush factor, we surmised, was why that rack was an underperformer.

And in fact, when we delivered our findings to the store's president, he jumped up from his chair, grabbed the phone, and ordered someone

to move that tie rack to a spot just off the main aisle. A few weeks later, we heard that sales from the rack had gone up quickly and substantially. Since that day we've found countless similar situations in which shoppers have been spooked by too-close quarters. In every case, a quick adjustment was all that was needed. So the idea of a body bubble gets applied to shopping—and we can push the idea even farther. It isn't that we hate crowds. A teeming cluster of people can be exhilarating. At Yankee Stadium, or even a sale at the local fashion emporium, we show up expecting company, and a lot of it. Sure, we can get claustrophobic and sometimes even scared, but after all, we're the ones who put ourselves there. Where butt-brush kicks in big time is where we get bumped and we don't expect it.

Another such "accident" of patient observation and analysis happened during a supermarket study we performed for a dog food manufacturer. While staking out the pet aisle, we noticed that while adults bought the dog food, the dog treats—liver-flavored biscuits and such—were more often being picked out by children or senior citizens. After giving it some thought, we realized that for the elderly, pets are like children, creatures to be spoiled with sweets. And while feeding Fido may not be any child's favorite chore, filling him up with doggie cookies can be loads of fun. Parents indulged their little ones' pleas for treats here just as they did over in the cookie aisle.

Because no one had ever noticed who exactly was buying pet treats, however, they were typically stocked near the top of the supermarket shelves. As a result, our cameras caught children actually climbing the shelving to reach the treats. We witnessed one elderly woman using a box of aluminum foil to knock down her brand of dog biscuits. Move the treats to where kids and little old ladies can reach them, we advised the client. They did so, and sales went up instantly.

Even the plainest truths can get lost in all the details of planning and stocking a store. A phrase I find myself using over and over with clients is this: The obvious isn't always apparent.

While studying the cosmetics section of a drugstore chain, we watched a woman in her sixties approach a wall rack, study it carefully and then kneel before it so she could find the one item she needed:

concealer cream, which, due to its lack of glamour, was kept at the very bottom of the display. Similarly, in a department store we watched an overweight man trying to find his size of underwear at a large aisle display—and saw him stooping dangerously low to reach them, down near the floor. In both cases, logic should have dictated that the displays be tailored to the shoppers who use them, not to the designers who made them. Move the concealer up, we advised, and put something aimed at younger shoppers down near the floor. Young shoppers will find their products wherever they're stocked.

In some studies, we synthesize every bit of information we can possibly collect into a comprehensive portrait of a store or a single department. A major jeans manufacturer wanted to know how its product was sold in department stores, so in one weekend we descended on four sites, two in Massachusetts and two in the Los Angeles area. Each department was similar—the jeans section was a square area that held from eight to twelve tabletop displays and some wall shelving. We started by drawing a detailed map of each, showing the displays and the aisles leading into and out of the sections but also where any signs or other promotional materials were posted. During that weekend we tracked a total of 727 shoppers and observed many more on camera. We paid particular attention to the "doorways," our term for any path leading into or out of an area of a store. Until the client knew which paths were most popular, it was impossible to make informed decisions about where to stock what or where to place the merchandising materials meant to lure shoppers.

By the time our study was completed, we could say what percentage of customers used which paths into each of the sections. Once we knew that, it was clear, for instance, that much of the signage was misplaced—common sense dictated that it be positioned to face the main entrance of the store, when in fact most jeans shoppers came upon the section from a completely different direction. Even the client's big neon logo and a monitor showing rock videos were facing the wrong way if their job was to signal to the greatest number of shoppers. We tracked shoppers from table to table, seeing where they stopped, what signs they read, whether they noticed the video monitors, and how they handled

the merchandise, including if they took anything to the dressing rooms. If they seemed to be showing jeans to a companion, we noted that, too. Our interviewers also questioned some of the shoppers captured on video so that their demographic information and their attitudes and opinions could be correlated with their behaviors—to see, for example, whether young shoppers with high school educations who say they depend on brand name when choosing jeans read price tags. After the research is done and the numbers are crunched and analyzed, we see what sense can be made of what we've learned.

For example, if we were to find that a high percentage of male shoppers buys from the first rack of jeans they encounter, and that these shoppers tend to enter the section through the aisle leading from men's accessories rather than from the women's side of the store or from the escalator, then we would advise our client to ask for the display table nearest men's accessories.

Or maybe there's another determining factor—maybe men who are accompanied by females and entering the section from the women's department buy more jeans than men who are alone. In that case, the best table would be nearest the women's merchandise. But no one knows for sure until we collect the data.

In other instances, we're hired to study some small retail interaction in great detail. A premium shampoo maker who wanted to know about the decision-making process of women shoppers who buy generic, or store-brand, beauty products commissioned one such project. The client was interested in the "value equation" women bring to each shopping experience—how does the shopper who buys from the generics section at the supermarket in the morning and then from Bloomingdale's in the afternoon decide which product she'll buy where? Does she judge that her skin deserves the premium brand but her hair can settle for the generic? Once upon a time, only the budget-conscious bought store brands, but now you find them in everyone's shopping basket. What's the secret?

Let's call her shopper number 24, a thirtysomething woman in yellow pants and a white sweater, accompanied by a preschool-age girl, who enters the health and beauty aisle of a supermarket at 10:37 A.M.

on a Wednesday morning. She has a handbasket, not a shopping cart, and has already selected store-brand vitamin C capsules and a large container of Johnson's baby powder. She is also holding a shopping list and a store circular. She goes directly to the shampoo shelves and picks up a bottle of Pantene brand, reads the front label, then picks up a bottle of the store brand and reads the front label, then reads the price tag on the Pantene, then reads the price on the store brand, and then puts the store brand in her basket and exits the section forty-nine seconds after she entered it. In that brief encounter, there was lots of data to collect—what she touched, what she read, and in what order—about twenty-five different data points in all. If, in one day, we track a hundred shoppers in that store's health and beauty aisle, it amounts to twenty-five hundred separate data entries. As the woman exits the section, we interview her, asking twenty questions in all. So each of the twenty-five data points has to be cross-tabulated with each of her twenty answers—a cross-tab challenge, take it from me. Until quite recently no university ever attempted such a study, and so it was left to the world's businesses—its retailers, banks, restaurant chains, manufacturers and designers of displays and packaging—to underwrite the creation of this science, which they did and continue to do by hiring us and sending us out into the field.

I make much of the accidental nature of the science of shopping, and perhaps it's because this all began almost by accident when I was a student and admirer of one of America's most esteemed social scientists, William H. Whyte, author of such highly influential books as *The Organization Man*, *The Last Landscape*, *City: Rediscovering the Center* and *The Social Life of Small Urban Spaces*. He was also the founder, in 1974, of the Project for Public Spaces, or PPS, which still exists and is still a magnificent contribution to the preservation and ongoing good health of the urban landscape.

William H. Whyte, or "Holly," as his friends called him, was, in his active days, a quixotic, beloved figure (he died in 1999). He had the white hair and aristocratic mien of a WASP banker, yet he had fallen in love with the streets of New York City and worked hard to learn how

people might best use them. Whyte's greatest contribution was his research into how people use public spaces—streets, parks, plazas and so on. Using time-lapse photography, hidden trackers and interviews, he and his associates would stake out some urban plaza or minipark, say, and study it, minute by minute, over the course of several days. By the time they finished, they could tell you everything about every bench, ledge, path, fountain and shrub, and especially how people interacted with them, using them as places to lunch, sun, socialize, people-watch, nap or just happily and peacefully loiter. Whyte and his colleagues would measure everything—the ideal width of a ledge for sitting; how sunlight, shade and wind affect park use; and how a public space's surroundings, the office towers or construction sites or schools or neighborhoods, determined the quality of life there.

Whyte, who started his career as an editor at *Fortune* magazine, was, essentially, a scientist of the street—the first one, which is amazing when you think of how long streets existed before he came along. His work has been used to make public spaces better and more useful to citizens, which in turn made cities better and more useful, too. Whyte's methods were a kind of lens through which a physical environment could be studied and improved, and my work on behalf of shopping owes a great deal to his methods.

Back in 1977, I was a part-time instructor at City University of New York, teaching courses in fieldwork techniques for the environmental psychology department. I was also working in an establishment of which I was part owner, the Ear Inn, a bar in downtown Manhattan. There, I had a customer who had been hired to design a system of signage at Lincoln Center, the performing arts complex that's home to the Metropolitan Opera House, Avery Fisher Hall—about a dozen theaters in all. He told me they needed someone to look into the usage and circulation patterns of the underground concourse that connected the buildings to parking garages and the subway. There was a small, makeshift gift shop down there at the time, but Lincoln Center wanted to see if a larger store might be viable there. First, though, they needed to make sure that a store wouldn't create congestion in the pedestrian walkways. With my customer's help, I got the job.

So I recruited a few of my students to help and we took some cameras, staked out our observation spots and went to work counting and mapping. The crowding question was easy enough to answer—we roped off an area exactly the size of the store they wanted to build, then watched and filmed pedestrians streaming through during the busiest times. We suggested then that with the room available, they should add some benches down there, to make it something of a destination rather than just a corridor. Our client declined to take our advice then, but today the benches are in place. I also strongly recommended that they double the size of the ladies' room, and they declined to take that advice, too. Today, thirty years later, the line at the ladies' room still goes out the door during busy times. Shameful.

As I was compiling the data to write the report and looking at the many hours of film I had shot, I realized that from one of the camera positions I could see inside the gift shop, all the way to the cash register. There, as I watched, two customers lined up to pay. One looked to be a wealthy woman, probably an opera-goer, who had piled a small tower of boxes on the counter. Next to her was a teenage girl whose purchase required just one small brown paper bag. I couldn't see enough to tell exactly what was going on, but I was intrigued.

I visited the shop the next day and talked to the clerk, who told me that the woman was the wife of a Mexican diplomat who had decided to buy some fancy music boxes as gifts to take home with her. The boxes were expensive, and she was buying about a dozen of them, for a total sale of close to \$9,000. She needed to pay quickly, before intermission ended, and she had to arrange to have the boxes delivered to her. There was also the matter of having sales tax waived owing to her diplomatic status. A complicated transaction, to say the least.

But this had to wait while the clerk handled the transaction with the teenage girl, who had arrived at the register first bearing her selection—a ballerina pen.

It was clear even to an academic like me that the cash register procedure could stand a little reorganization and clarification. These two transactions should not be competing for the same clerk's attention. And then the lightbulb clicked on. Why not take the tools of urban

anthropology and use them to study how people interact with the retail environment?

Years earlier I had witnessed an argument between the esteemed sociologist and author Erving Goffman and Jack Fruin, the chief engineer of the Port Authority of New York and New Jersey, who was at that moment in the midst of a gigantic undertaking, the planning and construction of Newark International Airport. Jack was expressing his emphatic frustration with the world of academia; he had attempted to hire some scholar-experts to guide his engineers and architects in their work, but instead of the clear-cut advice he had hoped to receive, he was getting buried under the academics' typical inability to assert any fact, no matter how small, that hadn't been completely proven by research. Goffman held the intellectual high ground in their argument, but at one point I clearly remember thinking, *I'd have a lot more fun working for Jack than for Erving. Erving's hiding in his ivory tower. Jack is out there doing stuff.*

Not long after the Lincoln Center assignment, I was sitting with some friends at a nightclub in Greenwich Village. One of the guys at our table was a young executive with Epic Records, a division of CBS, and I described to him my bright idea of measuring what happens in stores—the thought that there might be something worth learning by turning scientific tools on shopping. And over the course of a few beers my idea must have sounded interesting, because the guy said, "Why don't you send me a proposal?"

Full of ambition the next morning, I rose early, dragged out my manual typewriter and drafted a plan. I sent it over quickly, then waited. For, oh, about a year. Of course I tried writing again and telephoning during that time, but no one ever returned my calls. These were the dark ages of the science of shopping, remember.

And then, out of the blue, I heard from a woman who was in charge of market research for CBS Records. She said that they had found my proposal in a dusty file somewhere and were all quite fascinated by it, and was I still interested in studying a record store?

Sure, I said, inwardly rejoicing that a major American corporation was actually going to underwrite—to the tune, I think, of about \$5,000—my research into the habits of the modern shopper. I

immediately called a few of my students, assembled some notebooks and time-lapse cameras, and made my way to a record store in a northern New Jersey mall.

Now, nearly decades and close to two million hours of videotape and much personal observation later, that study seems almost charmingly rudimentary. But at the time, it felt as though the discoveries came flying fast and furious.

For instance: In the late '70s, when the study was being done, traditional singles—45 rpm records—were still big sellers. The store, wisely, displayed the *Billboard* magazine chart of bestselling singles near the racks of records, as a stimulus to sales. But our film showed that most buyers of 45s were adolescents—and the chart was hung so high on the wall that the kids had to stand on their toes and crane their necks to see what exactly was at the top of the chart. We suggested to the manager that the chart be lowered, and a week later he called to say that sales of 45s had gone up by 20 percent. Just like that! Lower the chart! It worked!

We spent a lot of time that weekend watching people in line to pay at what the retail industry calls cash/wraps. Regardless of what store designers and merchandise managers think, in many ways the cash/wrap area is the most important part of any store. If the transactions aren't crisp, if the organization isn't clear at a glance, shoppers get frustrated or turned off. Many times they won't even enter a store if the line to pay looks long or chaotic.

At this store, there were several big displays of new releases as soon as you walked in, just a few feet from the cashier. This was fine as long as the store was empty, but if customers were in line, their bodies completely hid the displays. Put up a stanchion and a velvet rope to keep the line off to one side, we suggested, and again, our advice had an instant effect—sales of records from the displays went up immediately.

Doesn't all this sound just the least bit obvious? It does to us, too, especially after we've spent so much time watching and filming and timing and interviewing and so on. Until then, however, these were the kinds of problems that had remained hidden in plain view.

While watching the record store customers, we noticed an odd

pattern: The LP section (this was pre-CD, remember) was always more crowded than cassettes, but sales were split evenly between the two formats. Following customers, the reason became clear: Because the LP covers were bigger, it was easier to read the song lists and see the photos, so cassette shoppers would browse in LPs, make up their minds, and then go to the tapes section to find their choices. Our suggestion was to make the aisles wider in LPs so that shoppers wouldn't feel crushed and rushed, a definite sales killer. Also, we thought the store should invest in more durable carpet for the sections that got significantly more traffic.

My final memory from that study comes from a video clip I still show to audiences: a young man shoplifting classical music tapes. Only after watching him take the tapes over and over on the film did I notice that the bag he slipped them into was from a chain that had no location at that mall. I passed this tidbit on to the client's security executive and told him that they should be watchful whenever such "wrong" bags were spotted in their stores (remember, this was before security tagging). I got back a note saying that they had prevented several thousands of dollars in theft using that method of detection.

And thusly, a science was born.

Before the science of shopping existed, there were at least two other ways to measure what took place in a store. The most common way of viewing a store is to simply examine "the tape"—the information that comes from the cash registers, which tells what was bought, when and how much of it. This is how virtually every retail undertaking, from the largest, most sophisticated multinational chain to the corner newsstand, does it. It's a fine way to see how the store as a whole has performed this quarter, or this year, or on any given day, or even time of day, and is, in the end, the measure of a store's overall health and growth (or decline) that counts. But as a diagnostic tool, or as a way of figuring out what happens in the store and how, it is not very useful. Sales research records your victories; what it does not do is look at where you are losing. What hurts is when you get the shopper in the door, down the aisle and in

front of the product, and for whatever reason, they don't buy. When businesspeople attempt to infer too much from sales data, it can be downright misleading. Here's a good example, from a chain drugstore in a Massachusetts mall. This was the first mall store owned by this particular company, and so management was eager to see the results. Based solely on total sales, our client was pleased overall, and in particular with how the aspirin section of the store was performing.

But based on all our many previous studies both of drugstores and of the aspirin category, one crucial figure was on the low side. The product conversion rate—the percentage of shoppers who bought—was below what we expected. In other words, plenty of customers stopped at the aspirin section and picked up and read the packages, but too few of them actually bought aspirin. And the conversion rate for aspirin is usually high—it's not the kind of product you idly browse; you tend to go to that aisle only when you're in need. So we spent some time specifically watching the aspirin shelves, and we trained a video camera on them, too.

Over the course of three days, a pattern emerged. The aspirin was displayed on a main aisle of the store, on the path to some refrigerated cases of soft drinks, which tended to draw a great many customers to that part of the store. That might lead one to expect that the aspirin would sell well, but just the opposite happened. The main customers for cold drinks were teenagers, and our observation showed many of them entering and making a beeline for the coolers. In fact, this was a favorite place for the mall's young employees to grab a quick cold soda during breaks.

These young shoppers were supremely uninterested in aspirin. The shoppers, often seniors, who did want aspirin stood a little nervously at the shelves, searching for their usual brand or figuring out which was the better deal while also trying to stay clear of the teenagers tearing down the aisle. In fact, a substantial number of aspirin shoppers became so irritated or thrown off balance by the teenagers that they would prematurely break off their browsing and walk away empty-handed. It was a modified version of the butt-brush effect—the shoppers weren't being jostled exactly, just a little rattled. You could see it plainly on the

videotape—some customers were practically cringing and hugging the shelves, not the ideal shopping position. And when we timed shoppers, we found that they were spending less time at the shelves than our experience led us to expect.

This is something that comes up in our work all the time: A store has more than one constituency, and it must therefore perform several functions, all from the same premises. Sometimes those functions co-exist in perfect harmony, but other times—especially in stores selling diverse goods, like cold drinks and medicines—those functions clash. We also saw this in a Harley-Davidson dealership, where a roughly three-thousand-square-foot showroom has to make room for well-off male menopause victims looking to recover their virility by buying bikes, blue-collar gearheads who are there for spare parts, and teenage dreamers interested in the Harley-logo fashions. All three groups want nothing to do with one another. When a premises' functions clash, a way must be found to accommodate as many uses as possible. In this drugstore, we advised our client about what we had learned and suggested a counterintuitive move—that the aspirin be relocated to someplace off the main drag. Fewer total customers would come upon it, we knew, but more aspirin would be sold. When they moved the shelves, sales rose by 20 percent.

We performed research for a large bookstore that had recently put a big table of discounted books just inside the entrance, where every customer would see it first thing. And it performed admirably—almost everyone stopped for at least a cursory browse, and the percentage that bought at least one book was high. Which meant that, according to the cash register tape, the table was a resounding success.

Except that as we tracked shoppers, we found that the number who would go to the table and then travel through the rest of the store was lower than it should have been. In a case like this, every hour on the hour a tracker would hurry through the entire store and note how many shoppers were in each section, including the register area, the coffee shop and so on. This is the density check that we perform as part of every store study, and it tells us a great deal: It gives an instant snapshot of the store's population and where people are drawn or not; it suggests

when something about the architecture or the layout may be inhibiting shoppers from visiting certain areas; and it shows how shoppers move (or fail to) through the premises. And in fact, taken section by section, the number of shoppers who were penetrating the rest of the store was uniformly down. Also, our track sheet maps of customer travels began showing a telltale shallow loop—shoppers would enter, hit the bargain table, then maybe visit one or two more displays, but they never strayed far from the front of the store before heading to the cashier. This was no coincidence, needless to say—customers were choosing from the discount table, then going directly to the register, paying for their bargains and leaving without even browsing the bestsellers or any of the other books selling at the normal profit margins. Our shopper interviews turned up an unfortunate side effect, too: Thanks to the prominence of the bargain table, the store was gaining a reputation as a discounter rather than as the place to go for the hot new book. The success of the table was causing the failure of the rest of the store.

So much for what can be learned from the register tape.

The second means of learning what goes on in a store, employed by the most famous names in market research (whether political, commercial or any other) is simply to ask people questions about what they just saw, or did, or considered doing. That can happen in person, online, on the phone or in a focus group—it's all about asking people what they think.

Let's take a telephone poll conducted by the Democrats and the Republicans, for instance, or just the shopper interviews that take place as you exit a store or a shopping center. After a long list of questions, some basic demographic information is taken (age, education, income, sex, race and so on). From those two, a big fat binder full of suppositions is assembled: Forty-year-old Caucasian college-educated married mothers of two living in Northeastern suburbs and driving station wagons would prefer Jif even more if it were low-fat, for example. Or men who buy Coke at convenience stores say they would notice their brand less often if it were any color but red. Or one quarter of all college graduates eats pasta once a week. The possibilities for cross-referencing are endless, and there is undoubtedly some marketing wisdom to be gotten from

such studies. But they don't really reveal much about what happens in a store, when shoppers and goods finally come together under the same roof. There are surveys that do ask customers for information about what they saw and did inside a store, but the answers are often suspect. Sometimes people just don't remember every little thing they saw or did in a store—they weren't shopping with the thought that they'd have to recall it all later. In a fragrance study we performed, some shoppers interviewed said they had given serious consideration to buying brands that the store didn't carry. In a study of tobacco merchandising in a convenience store, shoppers remembered seeing signs for Marlboro even though no such signs were in that store.

If we went into stores only when we needed to buy something, and if once there we bought only what we needed, the economy would collapse—boom.

Fortunately, the economic party that started the second half of the twentieth century has fostered more shopping than anyone would have predicted, more shopping than has ever taken place anywhere at any time. You almost have to make an effort to avoid shopping today. Stay out of stores and museums and theme restaurants and you still are face-to-face with Internet shopping twenty-four hours a day, seven days a week, along with its low-rent cousin, home shopping on TV. You have to steer clear of your own mailbox, too, if you're going to duck all those catalogs.

As a result, every expert agrees, we are now dangerously over-retailed—too much is for sale, through too many outlets. The economy even at its strongest can't keep up with retailing's growth. Judging from birthrates, we're generating stores a lot faster than we're producing new shoppers.

In 2008, across most of the first world, we are building stores and malls no longer to serve new customers but to steal someone else's. There is no irony that the cutting edge of retail today is no longer found in North America or Western Europe. Moscow, Dubai, Shanghai and Mumbai are the newest retail hot spots—places where money is

young, economies are booming and you have a whole lot of pent-up demand.

Still, here in the United States, our focus has been on same-store sales—how can you do more business in the same space or location? That focus on tactics has been another accelerant that has fueled the growth of the science of shopping.

There's another reason that the science of shopping is a force today.

Generations ago, the commercial messages intended for consumers' ears came in highly concentrated, reliable forms. There were three TV networks, AM radio only, a handful of big-circulation national magazines, and each town's daily papers, which all adults read. Big brand-name goods were advertised in those media, and the message got through loud, clear and dependably. Today we have hundreds of TV channels, and remote controls and TiVo to allow us to skip all the ads if we choose to. There's FM and satellite radio now, a plethora of magazines catering to each little special interest, a World Wide Web of infinitely expanding sites we can visit for information and entertainment, and a shrinking base of daily newspaper readers, all of which means that it is harder than ever to reach consumers and convince them of anything at all.

Simultaneously, we are witnessing the decline of the influence of brand names. A generation or two ago, you chose your brands early in life and stuck by them loyally until your last shopping trip. If you were a Buick man, you bought Buicks. If you were a Marlboro woman, you smoked Marlboros. You chose your team—Coke or Pepsi, Kenmore or Whirlpool, Zest or Ivory—and stayed with it. Today, in some ways, every decision is a new one, and nothing can be taken for granted.

What all that means is that fewer buying decisions are being influenced outside the premises of the store. And many more of those decisions are being made in the store itself. It means that shoppers are susceptible to impressions and information they acquire inside stores, rather than relying on brand-name loyalty or advertising or marketing to influence what they buy. The level of impulse purchasing is going through the roof—in supermarkets and everywhere else, too. Even big decisions are being made right there on the selling floor.

As a result, the most important medium for transmitting messages and closing sales is now the store and the aisle. That building, that place, has become a great big three-dimensional advertisement for itself. Signage, shelf position, display space and special fixtures all make it either more or less likely that a shopper will buy a particular item (or any item at all). The science of shopping is meant to tell us how to make use of all those tools: how to design signs that shoppers will actually read and how to make sure each message is in the appropriate place. How to fashion displays that shoppers can examine comfortably and easily. How to ensure that shoppers can reach, and want to reach, every part of a store. It's a very long list—enough to fill a book, in my opinion.

Finally, our studies prove that in general, the longer a shopper remains in a store, the more he or she will buy. And the amount of time a shopper spends in a store depends on how comfortable and enjoyable the experience is. Just as Holly Whyte's labors improved urban parks and plazas, the science of shopping creates better retail environments—ultimately, I would argue we're providing a form of consumer advocacy that benefits our clients as well.

When I started work on this book in 1997, Envirosell was a pioneer in the world of stores and commercial environments. Ten years later, the term "science of shopping" is part of the vocabulary of any merchant or marketer. And a lot of firms now claim to do what we do. After all, observation is a seminal form of how human beings learn, so why not start an observation business? To every company that has copied what we do, I welcome you to the community of people dedicated to making our lives work better. At the same time, there are other interlopers who have truly muddied the waters.

The first? Technology companies that have streamlined data collection. They have software packages that can hook up to a facility's surveillance cameras and count bodies, one after another. How relevant is it to measure the number of people passing a sign or a display? Does that mean they've looked, read or shopped? As I sit at my desk on the corner of Twentieth Street and Broadway in New York City, I have a stream of

technology companies coming in to showcase their latest cutting-edge products. How many times have I heard the expression "This is going to transform retail"? Most of it is what I call technology in search of an application. It can do this and gather this piece of information, and there's bound to be someone out there willing to pay for it.

Or I get a call from someone begging me for an hour and I agree to meet them, but before we do there arrives a seventeen-page nondisclosure agreement, or NDA. I have to explain that if someone hires me I'm happy to sign documents left and right, but to call me out of the blue and expect me to review a seventeen-page legal document borders on the obnoxious. Over the years I've come up with a good plan. I'll meet for an hour with anyone who wants to show me something and I'll give that person my honest response—if he, she or the company gives a \$750 donation to the charity of my choice. I've raised tens of thousands of dollars for halfway houses for homeless women in New York.

Some of the stuff I get is outright silly, like a software package designed to track tank movements from spy satellites. Put enough cameras with wide-angle lenses into your ceiling and voilà!—instant science of shopping. Quite a few of these companies are backed by serious venture capital money and propelled by slick presentations, expensive Las Vegas dinners at the appropriate conventions and lots and lots of promises. The venture capital firms see them not as research or consulting firms but as software ventures. Once in place, the output is automated; you sign a two-year contract that promises you weekly reports. The only problem is that two months later, you look up from yet another weekly report and ask, what in the world do we do with this? We have a number of clients who defected from us and bought a fancy software package only to return to us two years later. We were happy to have them back.

The other objection I have is with what we around the office call Envirosell Lite, where untrained and inexperienced people are sent into the field to do the same work we do: observe what is seen, what is touched, what is read. Simple as it sounds, these terms have to be defined carefully or what you get out the other side of the process is gobbledegook. We now have a number of competitors who sell a lower-priced version of what we do. You get what you pay for.

TWO

What Retailers and Marketers Don't Know

It might be useful right about now to pause and look at the science of shopping from the perspective not of the scientist but of the practitioner—that is, the retailer and marketer. He or she is certainly part of the equation we're studying, the provider of product services and shopping experiences, as it were. The retailer is also the one who's expected to absorb all our lessons and then apply the principles of what we've learned. The marketer needs to understand how his or her product or category of goods is shopped and bought. And since it's his or her own store we study, it's fair to ask: How much doesn't the retailer already know?

Well, more than you might think. For example, it's a testament to the until-recently uncharted state of the untamed retail environment that an extremely intelligent and able man, a senior executive in a multibillion-dollar chain, could be so very wrong when asked this simple question:

How many of the people who walk into your stores buy something? You'd know that, wouldn't you, if you were he? You'd think so, and

trust me, this fellow is no slouch in the knowing department. He knows quite a bit that goes on in his chain's thousands of stores, and he learns more on a daily basis—genuinely important things like total tickets (the number of transactions *and* their dollar value), and average sale amount, and sales in any given store compared to sales on the same day the year before, and sales within the various regions, and profitability by item and category and store and maybe even phase of the moon.

He knows all that.

When I asked how many of the people who walk into his stores buy something, his answer was: all of them, pretty damn near. And when I say it was his answer, I mean it was also the answer of the huge, PC-networked, data-chewing, number-crunching, cipher-loving organization at his command. Everybody there agreed: What we call the conversion rate—the percentage of shoppers who become buyers—was around 100 percent. After all, this corporation reasoned, their outlets were destination stores, so people didn't go there unless they had some very specific purchase in mind. Hence, they believed, the only time shoppers *didn't* buy was when their selection was out of stock.

In fact, the very concept of conversion rate, implying as it does that shoppers need to be somehow transformed—"converted"—into buyers, was alien to this man and this corporation (as it still is to many other successful companies and executives).

I was asking the question because we had just performed a large-scale study of this chain's stores. And I knew the conversion rate, based on our having spent hundreds of hours counting, among other things, the number of shoppers who entered and the number who made purchases. It was a very good conversion rate for stores of this kind. But it was about half of what this man thought it was. To be precise, 48 percent of shoppers bought something.

The man, because he believes in the value of information, was taken aback but eager to hear more. Some in his organization, though, were incredulous, outraged, insulted, and certain that we had made a terrible miscalculation. So they performed their own homegrown version of our study, standing at the door of a store or two, counting the number of people who went in and the number who emerged holding bags.

Their result was identical to ours. Which, in the end, was very positive news for them. It meant that a good company could change some very specific things and become even better. If you talk to the executive, he'll say that our study brought about "a fundamental change in some of the long-held beliefs and opinions of this company." At any rate, they've begun to do some things differently in store layout, display, merchandising and staffing, and I have no doubt that they'll improve their conversion rate and make more money as a result.

Our findings were also important to that company's big picture. We showed that meaningful growth—which Wall Street demands and everybody else is pretty fond of, too—can be stimulated at the store level, without having to expand the empire, an expensive strategy that always runs out of gas sooner or later. In 2007, same-store sales are the bellwether for a chain's good health.

The marketer was equally in the dark through the end of the twentieth century. Until the past decade, there was sales data or the compilation of register tapes. Today, however, almost all major consumer product companies have shopper- and consumer-insight groups. They often fiercely debate the difference between what happens to people in the store (shoppers) and what happens once they get their products home (consumers). All in all, insight groups have been a positive change. Yet for the marketers sitting in their suburban campuses, there are often some pretty striking disconnects. In 2008, it is easier to collect data than to figure out what it means, much less map out what you can or should do about it. Since the science of shopping was invented, there are now a lot of companies talking about the scale of their databases—we tracked a million shoppers with security cameras and so on—yet, in the end, what does it mean? To me, ten years after I wrote the first edition of this book, the rightful evolution of the science of shopping is for a corporation to look at what they do with this information and, based on whatever measure they use, ask themselves: Did it make or save us money?

Let's go back to the basics. Conversion rates vary wildly depending on what kind of store or product we're talking about. In some sections of the supermarket, the conversion rate probably is around 100 percent (I'm thinking of dairy or toilet paper here). In an art gallery or high-end

jewelry store full of big-ticket items, maybe one shopper in a hundred will buy something, and that's plenty. Whatever's being sold, though, I think it's impossible to dispute that conversion rate is a critically important measure of performance. Marketing, advertising, promotion and location can bring shoppers in, but then it's the job of the merchandise, the employees and the store itself to turn them into buyers. Conversion rate measures what you make of what you have—it shows how well (or how poorly) the entire enterprise is functioning where it counts most: in the store. Conversion rate is to retail what batting average is to baseball—without knowing it, you can say that somebody had a hundred hits last season, but you don't know whether he had three hundred at-bats or a thousand. Without conversion rate, you don't know if you're Mickey Mantle or Mickey Mouse.

Yet conversion in its simplest form has its limits. In the past ten years a number of companies have rigged up electronic counters on the doorways of stores, then hooked them up to the register. Voilà—instant ongoing conversion rates. Yet the real story is often hiding in the details. What's the difference between men and women? What happens when you add a kid to the process, or an African- or Latino-American? That counter at the door counts bodies, and that's all it counts, never mind the fact that it's unlikely a family of four will walk out of a store lugging four big-screen TVs, one per person. Yes, some of the more upscale ones can calculate body mass and get some gauge on people's gender, but I wouldn't bet the farm on it. We get a lot of calls from companies that installed counting systems, and three months into the daily stream of data, they're still wondering how they can turn that information into an ongoing, proactive, workable tool. For store managers it can be frustrating when the home office fires off numbers, and they respond, "Well, of course we have lower conversion numbers, because we get more casual, time-killing people in the door; as you might notice, we're located next to a kitchenware store and thus attract an entire army of exiled male spouses."

Still, a great many businesspeople don't know from conversion rate. It's not one of the ways of measuring a business that business schools emphasize. It's not about profit margins or return on investment or

money supply or any of that. It's all about what happens within the four walls of the store.

I can think of other underutilized ways to measure what happens inside a store. Once I asked a major cosmetics executive how much time women actually spent shopping for makeup per store visit.

"Oh, about ten minutes," he said.

"Hmm," I replied, knowing from the study we had just completed for him that the average shopper spent two minutes in the cosmetics section. The average shopper who bought something spent only thirty seconds more. Putting it into broader context, the average supermarket visit is about twenty-five minutes, including checkout. The average time spent in a hypermarket, or multidepartment store—whether a Wal-Mart Supercenter in the U.S., a European Carrefour, or a Pick n Pay in Cape Town, South Africa—is about thirty minutes. That's stopwatch time. But if you ask someone how long he or she spent in a store, that person will often double that number. In any commercial setting, time comes in three forms. There's real time, there's perceived time and then there's a combination of the two.

Now, the amount of minutes a shopper spends in a store (assuming he or she is shopping, not waiting in a line) is again an important factor in determining how much she or he will buy. Over and over again, our studies have shown a direct relationship between these numbers. If the customer is walking through the entire store (or most of it, at least) and is considering lots of merchandise (meaning he or she is actually looking and touching and thinking), a fair amount of time is required. In an electronics store we studied, nonbuyers spent five minutes and six seconds in the store, compared to nine minutes and twenty-nine seconds for buyers. In a toy store, buyers spent over seventeen minutes, compared to ten for nonbuyers. In some stores buyers spend three or four times as much time as nonbuyers. A great many factors contribute, one way or the other, to the length of a shopping trip, and studying them is most of what we do. The majority of the advice we give to retailers involves ways of getting shoppers to shop longer. But you've got to know how long people spend shopping your store or your product before you can know how to increase it.

The flip side of that measure is what we call the confusion index, or the number of people walking around stores completely at sea. Remember that time is relative, so if the ten minutes you spend at a Target or Wal-Mart is spent walking in circles, it'll feel like you've been in there for a half hour. And in the end, while you may stumble on something good, if you can't find what you came in for, what's the point? One of the major victories we have won in the past ten years has been with office product superstores. In 1997, whenever Staples, OfficeMax or Office Depot opened a new location, they used a warehouse format. Shelving ran twelve to fifteen feet in the air—making it a challenge, to say the least, for customers who didn't shop the store every week to find stuff. In many aisles, a third of the people there weren't shopping for anything in that aisle. They were browsing, or killing time, or, far more often, they were utterly clueless as to where the computer paper was stacked. All too many shoppers found what was on their list and left. Staples was the first superstore to make changes based on our suggestions. They developed what we call an "arena concept," where the aisles in the middle of the store are low and get gradually higher as customers reach the perimeter. The change, I have to say, is pretty remarkable. You walk in . . . and even in a large store you see everything. The full monty. Almost no one walks down a particular aisle who doesn't want to be there. OfficeMax and Office Depot have come up with their own versions of an arena. In some cases, same-store sales are up 20 percent or higher. Do the new stores hold people longer? You bet, and the time customers spend there is considerably happier.

Here's another good way to judge a store: by its interception rate, meaning the percentage of customers who have some contact with an employee. This is especially crucial today, when many businesses are cutting overhead by using fewer workers, fewer full-timers and more minimum-wagers. All our research shows this direct relationship: The more shopper-employee contacts that take place, the greater the average sale. Talking with an employee has a way of drawing a customer in closer.

We studied a large clothing chain where the interception rate was 25 percent, meaning that three quarters of all shoppers never spoke a word

to a salesperson. That rate was dangerously low—it meant that in all probability customers were becoming frustrated, wandering the stores lost or confused or just in need of information, trying (and trying) to find a clerk with an answer. It also meant that employees couldn't have been spending much time actively selling anything. They were stocking the shelves and ringing up transactions and not finding time to do much in between. This was practically a guarantee that the store was underperforming. It was also a telling clue as to why.

Across the world we, as a species, like to be recognized, but we also value our privacy. One of our clients has a rule that if an employee gets within six feet of a customer, that employee has to say hello. I don't like the rule because it takes the judgment out of the hands of the person working the floor—but I do like the idea behind it.

Here's another measure, a real simple one: waiting time. This, as we discuss elsewhere, is the single most important factor in customer satisfaction. But few retailers realize that when shoppers are made to wait too long in line (or anywhere else), their impression of overall service plunges. Busy executives hate to wait for anything, but some don't realize that normal people feel the same way. One housewares chain's vice president was startled when we showed him video in which a woman who had just spent twenty-two minutes shopping in his store joined a very long checkout line, stood there until it dawned on her that she was in cashier hell, and abandoned her full cart and exited the place. We weren't surprised—we see this happen all the time. We once did a job for a bank that was about to institute a policy where customers made to wait five minutes or more would receive \$5. After studying the teller lines over the course of two days, we informed the client that this policy would cost them about triple what they had set aside. They dropped the plan and went to work on shortening the wait.

One final calculation doesn't involve any particular way to measure a store, but it's a remarkable example of businessperson ignorance: They often don't really know who their shoppers are. I've already discussed the pet treats manufacturer whose product was typically stocked high on shelves, unaware that its main buyers were old people and children. We studied a chain of family-style restaurants whose outlets had too

many tables for two and not enough tables for four, which caused headaches during busy times—all because no one had ever bothered to count the size of dining groups. In another family-style chain we studied, each restaurant devoted roughly 10 percent of its floor space to counter seating. During slow times it went unused because lone diners preferred tables, where they could read newspapers or magazines. During busy times it went unused because parties of two, three or four wanted to sit at tables. The counters were empty even as groups of diners stood in line waiting for tables.

The issue of retailers not knowing who shops in their stores comes up all the time. A newsstand in Greeley Square here in New York wanted to increase sales and planned to do so by expanding the space devoted to magazines. We pointed out that a large percentage of his customers was either Korean—the square borders on a large Korean enclave—or Hispanic. Stock Korean-language magazines (Korean papers already sold well) and soft drinks popular in the Latino market, we advised, and when they did, sales rose immediately.

This related issue comes up all the time in New York, Los Angeles and other big cities: foreign shoppers in need of a break from stores and restaurants. Almost no accommodation is made for Asian shoppers, despite their numbers and tendency to spend a lot of money on luxury goods. But there are no sizing conversion charts, no currency exchange rates posted, not even a little sign or two in Japanese or Korean telling shoppers which credit cards are accepted. Smart retailers would reward employees who learned a little Japanese, German, French or Spanish—even just a handful of phrases would make a difference, as anyone who has shopped in a foreign country would realize. Restaurants should have menus in Japanese and German on hand.

But it doesn't have to involve anything so exotic for retailers to be woefully clueless about who's in their stores. I loved visiting a national chain drugstore's branch in Washington, DC, where there was a large assortment of dye and other hair products for blondes—in a store where over 95 percent of shoppers are African-Americans. I also was amused in a Florida-based drugstore chain's Minneapolis branch, where a full assortment of suntan lotion was on prominent display—in October.



**Walk Like an Egyptian:
The Mechanics of Shopping**

T

The first principle behind the science of shopping is the simplest one: There are certain physical and anatomical abilities, tendencies, limitations and needs common to all people, and the retail environment must be tailored to these characteristics. Our technical term for it is "the biological constants."

In other words, stores, banks, restaurants and other such spaces must be friendly to the specifications of the human animal. There are all the obvious differences in shoppers due to gender, age, income and tastes. Going outside North America, we face other issues, too—the relative density of a population, the weather, security considerations, a country's economic well-being and so on. But, that said, there are many, many more similarities. This fact—and the accompanying thought that any built environment (whether it's a hotel, a stadium, an airport, a hospital, even a home or an apartment complex, much less a store or bank) should reflect the nature of the beings who must use it—seems too obvious to bear mentioning, doesn't it? After all, who designs and plans and operates these premises but human beings, most of whom are

also at one time or another shoppers or users themselves? You'd think it would be easy to get everything right.

Yet a huge part of what we do is uncover ways in which environments fail to recognize and accommodate how human machines are built and how our anatomical and physiological aspects determine what we do. I'm talking about the absolute basics here, such as the fact that we have only two hands and that at rest they are situated approximately three feet off the floor. Or that our eyes focus on what is directly before us but also take in a periphery whose size is determined in part by environmental factors, and that we'd rather look at people than objects. Or that it is possible to anticipate and even determine how and where people will walk—that we move in predictable paths and speed up, slow down or stop in response to our surroundings.

Whether I'm in Tokyo or Paris, Cape Town or Orange County, California, whether I am two hundred centimeters tall (read six feet, five inches) or five foot four, our basic human measures fall into a completely predictable range. I can be Chinese, Indian or Mexican—it doesn't matter. Everywhere in the world, our eyes work and age in the same way.

The implications of all this are clear: Where people go, what they see and how they respond determine the very nature of their experience. They will either see merchandise and signs clearly or they won't. They will reach objects easily or with difficulty. They will move through areas at a leisurely pace or swiftly—or not at all. And all of these physiological and anatomical factors come into play simultaneously, forming a complex matrix of behaviors that must be understood if any environment is to adapt itself successfully to our animal selves.

The overarching lesson that we've learned from the science of shopping is this: Amenability and profitability are totally and inextricably linked. Take care of the former, in all its guises, and the latter is assured. Build and operate a retail environment that fits the highly particular needs of shoppers and you've created a successful store. In the five chapters that follow, we'll see how the most elemental issues—the holding

capacity of the human hand, the limits to what a being in motion can read, even the physical needs of the nonshopper—matter in determining the shopping experience.

Take that same model and you'll notice it applies to every physical environment you interact with.

THREE

The Twilight Zone

S top.

Stay here with me a minute. Don't ask. Just watch.

I know we're standing in the middle of the parking lot. That's the point.

Do you notice how everybody's moving at a pretty brisk clip toward the store? Is it because they're all so darned excited to be going there? Well, maybe, but I've spent a lot of time watching people move through parking lots, and this is how they all do it—fast. A parking lot isn't the place for a leisurely stroll. It's not Fifth Avenue, or even Main Street. It's speeding cars, exhaust fumes and asphalt, with the usual elements on top—rain, wind, cold, heat.

Okay, so let's join everybody rushing for the store. What do you see ahead? Windows. And what's in them? Stuff. Or is it signs? Or is it stuff and signs? It's hard to tell, exactly, because of how the sunlight glares off the glass. Or because it's dark out, and the lighting is too low. Most retailers don't change the lighting depending on whether it's day or night,

meaning that visibility must be pretty bad during at least one of those periods, if not both.

For the sake of discussion, let's say we actually can tell what's in the windows: some kind of display—mannequins or a still life. Whatever it is, though, the scale is wrong. There are too many small things there that we can't quite see from this distance. Bear in mind, too, that the faster people walk, the narrower their field of peripheral vision becomes. But by the time we get close enough to see the goods or read the signs, we're in no mood to stop and look. We've got that good cardiovascular parking-lot stride going, and it's bringing us right into the entrance. So forget whatever it is those windows are meant to accomplish—when they face a parking lot, if the message in them isn't big and bold and short and simple, it's wasted.

Boom. We hit the doors and we're inside. Still got that momentum going, too. Have you ever seen anybody cross the threshold of a store and then screech to a dead stop the instant they're inside? Neither have I. Good way to cause a pileup. Come over here, stand with me now and watch the doors. What happens once the customers get inside? You can't see it, but they're busily making adjustments—simultaneously they're slowing their pace, adjusting their eyes to the change in light and scale, and craning their necks to begin taking in all there is to see. Meanwhile, their ears and noses and nerve endings are sorting out the rest of the stimuli—analyzing the sounds and smells, judging whether the store is warm or cold. There's a lot going on, in other words, and I can pretty much promise you this: These people are not truly in the store yet. You can see them, but it'll be a few seconds more before they're actually *here*. If you watch long enough you'll be able to predict exactly where most shoppers slow down and make the transition from being outside to being inside. It's at just about the same place for everybody, depending on the layout of the front of the store.

All of which means that whatever's in the zone they cross before making that transition is pretty much lost on them. If there's a display of merchandise, they're not going to take it in. If there's a sign, they'll probably be moving too fast to absorb what it says. If the sales staff hits them with a hearty "Can I help you?" the answer's going to be "No

thanks," I guarantee it. Put a pile of fliers or a stack of shopping baskets just inside the door: Shoppers will barely see them and will almost never pick them up. Move them ten feet in and the fliers and baskets will disappear. It's a law of nature—shoppers need a landing strip.

The same thing is true in a hotel lobby. Put a directory too close to the front door, and the people behind the front desk will have to answer stupid questions 24/7. Throughout our work looking at the lobbies of business hotels, the lack of what we call an "information architecture plan" can have a disastrous effect on customer service. If the concierge or bellhop has to tell people coming into your hotel all day, every day where the bathroom is, well, I don't care how much training you give people, *you* try answering the same question five hundred times a week and see if you don't get cranky, too. The windows, the doorways and the landing strip are the start of the consumers' experience, and the same goes for hotel guests.

When I talk to clients, they invariably point to our findings on the transition zone, or what has been termed the "decompression zone," as among our most meaningful and useful work. It is also perhaps the most startling news we deliver. I think that's mostly because our counsel defies the most ingrained human yearnings about the front: We all want to be there, at the front of the pack, the head of the line, the top of the class. To the front-runner go the spoils.

In the retail environment, however, up front is sometimes the last place you want to be. For instance, retailers will charge manufacturers for placing their name on the front door, which sounds like a smart use of the marketing dollar—everybody sees the front door. And then you realize that when shoppers approach a door, all they're looking for is a handle and some sign indicating whether to pull or push. We've yet to see a shopper actually stop his or her progress to read a door. There's only one time when anyone pauses to study what's written there: when the store is closed. Which may be worth something, as marketing tools go, but not a lot.

Today many stores have automatic doors, which make life easier for customers, especially those with packages or baby strollers. But the effortlessness of entering only serves to enlarge the decompression

zone—there's nothing to slow you down even a little. Revolving doors are even worse, as they actually thrust you into the store with a fair amount of momentum. Some stores, especially smaller ones, benefit from having the entrance provide more of a threshold experience, not less. Even a small adjustment—a slightly creaky door or a squeaky hinge—does the trick. Special lighting on the doorway also clearly marks the divider between out there and in here. Other stuff works too, like a change in flooring color or texture.

A big store can afford to waste some space up front. A smaller one can't. In either case, store merchandisers can do two sensible things where the decompression zone is concerned: They can keep from trying to accomplish anything important there, and they can take steps to keep that zone as small as possible.

A good lesson in what *not* to do with the entrance and decompression zone comes courtesy of a big, sophisticated company. In the early '80s, Burger King was testing a new salad bar. To introduce it with a bang, they decided that they'd switch the entrances and exits on many of their restaurants. Until then, the door closest to the parking lot was always the entrance. They turned that entrance into an exit and put the salad bar just behind the big window next to it, so you'd walk from your car, go to the old entrance, see the salad bar, and be so tempted by it that when you entered—through the *new* entrance—you'd head straight for the lettuce.

But here's what actually happened: Customers went to the old entrance and tried to find the handle, which had been removed as part of the reconfiguration. They would then back up, scratch their heads and begin searching for a way to get into the place. They weren't looking at the salad bar—they were too busy looking for a door! And once they found it, and burst into the restaurant feeling hungry and frustrated, all they wanted to do was find the counter and order their usual burgers and fries. In that atmosphere, the salad bar never had a chance.

Another bad idea for the decompression zone was invented at an athletic goods chain where management decreed that every incoming shopper had to be greeted by a salesclerk within five seconds of entering the store. Here's how that played in the real world: You'd walk in and

come face-to-face with a lineup of eager clerks hovering just inside the entrance like vultures, ready to pounce with a hearty hello. There's an interesting curve here: Greet people too early and you scare them away. Talk to them too late and you get a whole lot of frustrated customers. In our work with Estée Lauder's cosmetic counters, we were able to plot this curve pretty precisely. Leave people alone for at least one minute. Let them play first, and then you go from salesperson to cosmetics coach.

We discovered another misuse of the zone a few years ago, when we tested an interactive computerized information fixture that had been designed for Kmart by a division of IBM. It had a touch screen and a keyboard, and you'd ask it where men's underwear was, for example, and it would give you a map of the store and maybe a coupon for T-shirts or socks. A terrific idea, executed well. It helped customers and spared the store from having to pay someone to stand behind a desk and tell people where boys' sweaters were seventy-two times a day.

It wasn't long, though, before store executives discovered a little glitch: Few shoppers used the fixtures. The problem was that no one admits, six steps into a store, that they don't know where they're going. At that point you haven't even looked around long enough to realize you're lost. Placing the computers too close to the door had turned them into very expensive pieces of electronic sculpture. The store gave up on them right away, but I'm certain they could have worked just fine—maybe a third of the way into the store, at about the point where customers really *do* realize they're lost.

What *can* you do with the decompression zone? You can greet customers—not necessarily to steer them anywhere but to say hello, remind them where they are, start the seduction. Security experts say that the easiest way to discourage shoplifting is to make sure staffers acknowledge the presence of every shopper with a simple hello. Wal-Mart founder Sam Walton's homespun advice to retailers was that if you hire a sweet old lady just to say hello to incoming customers, none of them will dare steal.

You can offer a basket or a map or a coupon. There's a fancy store in Manhattan, Takashimaya, where the uniformed doorman proffers a handsomely printed pocket-size store directory as he ushers you in.

Just to the right of the entrance, within the transition zone, is the store's flower department. As you enter, you see it from the corner of your eye, but you don't usually stop in—instead, you think, "Hmm, flowers, good idea, I'll get them on my way out." Which makes perfect sense, because you wouldn't want to shop the rest of the store carrying a bouquet of damp daisies.

Right inside the door of an H&M, Gap or Wal-Mart, there's what's known as a "power display"—a huge horizontal bank of sweaters, or jeans or cans of Coke, that acts as a barrier to slow shoppers down, kind of like a speed bump. It also functions as a huge billboard. It doesn't say, "Shop me." It says, "Just consider the idea." It serves as a suggestion, plain and simple, and it also gets you in the mood for the rest of the store. You can catch up with the product later, at another time, typically in another section of the floor. Remember that more than 60 percent of what we buy wasn't on our list. And no, this isn't the same as an impulse purchase. It's triggered by something proposing the question "Don't you need this? If not now, then maybe in the near future?" The power display of beverages may remind you of who's coming home from college next Tuesday, the sweater of fall coming or the chilly weather in Maine, where you're planning a getaway weekend—and lo and behold, you leave the store with two six-packs of ginger ale and a new fleece.

Another solution to the decompression zone problem, which I saw at Filene's Basement, is to totally break the rule. Not just break it, but smash it. There, just inside the entrance, they've placed a large bin of merchandise that's been deeply discounted, a deal so good it stops shoppers in their tracks. That teaches us something about rules—you have to either follow them or break them with gusto. Just ignoring a rule, or bending it a little, is usually the worst thing you can do.

I'd love to see someone try this out-of-the-box strategy: Instead of pulling back from the entrance, push the store out beyond it—start the selling space out in the parking lot. After all, football fans make elaborate use of parking lots even in the worst weather, barbecuing and eating and drinking and socializing on asphalt. Drive-in movies everywhere are turned over to flea markets during daylight hours, proof that people will comfortably shop al fresco. Some supermarkets bring seasonal

merchandise out into the parking lot during summer; I visited one at a seashore resort that had all barbecue supplies, beach toys, suntan lotion and rubber sandals in a tent outfitted with a clerk and a cash register—allowing beachgoers to pull up, grab a few necessities and drive away, all without having to drag their wet, sandy selves through the food aisles and long checkout lines.

Pushing the store outside also begins to address an interesting situation in America, the fact that so much of the country has been turned into parking lots. Buildings can be put to a variety of uses—a clothing store can sell electronics or groceries or even be converted into office space. But our vast plains of asphalt will require more imaginative thinking. A few years ago, I visited a shopping mall in Johannesburg, South Africa, where they put a drive-in movie on the roof of one of their city's parking garages. Also in Johannesburg, I saw a display of Audis—every model car in every color an Audi can come in, some forty-seven cars in all, lined up in tight rows—and yeah, you bet, it was mobbed with people.

Our finding that being first isn't necessarily best actually extends beyond the decompression zone and into the store proper. In any section of a store, the first product customers see isn't always going to have an advantage. Sometimes just the opposite will happen. Allowing some space between the entrance of a store and a product actually gives it more time in the shopper's eye as he or she approaches it. It builds a little visual anticipation. Someone making a study of, say, the computer printer section of a store is highly unlikely to stop at the very first model and buy it with no further comparisons. By the time he reaches the midpoint of the printer section, though, he may feel confident and informed enough to decide. At trade shows, the booths just inside the door may seem most desirable, but they're pretty bad locations. Visitors zoom past them on their way into the hall, or, even worse, they arrange to meet friends by the entrance, thereby creating the (false) impression that there's a crowd at the first booth and scaring off genuine clients. Besides, just inside the door is usually drafty. It feels as though you're in the vestibule.

Cosmetics and beauty product firms don't usually want to occupy the first counter inside the entrance of a department store's makeup bazaar—they know that women, when reinventing themselves before a mirror, prefer a little privacy. That's not the only reason to wish for a little peace and quiet. If you were one of the two major players in the home hair coloring market, you'd want the best position possible in drugstores. Now, young women tend to buy hair color as a fashion statement—they've decided to go red for prom or they've been dreaming of that little extra glamour that being a platinum blonde creates. Older women, however, buy it as a staple—they've been using a particular color for fifteen years now, and more gray is coming in every day, so it becomes as regular a purchase as soap. As a result of that difference, older shoppers just find their color, grab it and go, while younger ones need to study the rack and the packaging awhile before they buy. In one study we performed for a shampoo maker, we found that older women shop for one third fewer products than their younger counterparts, 2.2 to 3.3. And so in a store where younger shoppers predominate, hair color will do best away from the bustle and the crowding, which usually means away from the front of the store. If most shoppers are older women, however, closer to the entrance is better for hair color—these shoppers won't be browsing for long anyway.

Finally, there's a famous (around our offices) story about a very elaborate and costly supermarket display for chips and pretzels—a handsome fixture featuring the cartoon character Chester Cheetah, who, aided by a motion-detector device, would say, "If you're looking to feed your face, you're in the right place," every time a shopper walked past. Frito-Lay, the fixture's owner, paid a great deal of money to have the displays stationed up front in supermarkets. They were effective—so much so that the greetings ran constantly, which soon maddened the cashiers who had to listen to the drawling voice for eight hours straight. Before long, at least one market's employees solved the problem neatly—they disconnected Chester, rendering him instantly agreeable but forever mute.

FOUR

You Need Hands

t's a chilly day and the shopper is a woman. What does that tell us? It says that at the very least she's carrying a handbag, and that she's wearing a coat, which she'll probably want to remove once she's inside the store, meaning she'll have to carry that, too. God gave her two good hands. But she's shopping with one.

If she selects something, the free hand carries it. Now she's down to no hands. Maybe, if it's small and light, she can tuck the purchase under one arm. Perhaps she'll sling the handbag over a shoulder or forearm. Then she'll have . . . let's call it a hand and a quarter. If she picks one more thing, though, she'll run out of hands. Only an extremely motivated buyer will persevere. Human anatomy has just declared this shopping spree over.

This is a classic moment in the science of shopping. The physical fact (most shoppers have two hands) is fairly well known. But the implications of that fact go unimagined, undetected, unconsidered, unaccommodated, unacknowledged. Ignored.

The hand-allotment issue came up early in the science of shopping.

It was the late '70s, and I got a chance to pitch what I do to Eastern Newsstand, the largest operator of newsstands in North America. Boy—talk about a tough business. Long hours, early morning deliveries, plus a complicated system of returning all the papers and magazines that don't sell. My girlfriend at the time knew the wife of the boss, and I got my loafer inside the door as a cocktail-party favor, if memory serves. They treated me okay, but I remember they started off pretty skeptical, and who can blame them?

I did the work as a freebie. Though I wasn't paid, the experience taught me plenty, and it also set me up with the Newspaper Association of America, or NAA, with whom I've had a rewarding relationship for more than a decade.

The site they assigned me was a newsstand at that great crossroads of humanity, Grand Central Station in New York City. We pointed our cameras at the stand and watched it during the busiest times, the morning and evening rush hours.

The success of the business depended on one crucial task—the newsstand's ability to process large numbers of transactions during the periods when everybody is in a hurry, either rushing from train to job in the morning or from job to train at night. Commuters on the run glance over at the newsstand to see how crowded it is. If it looks as though they can breeze in, buy a paper or magazine or cigarettes or gum and then be on their way, they'll stop. If it looks swamped with customers waiting to pay and nervously checking their watches, they'll keep going. They'll say to themselves, "Too much of a hassle, I'll miss my train, it'll be faster to get it elsewhere."

The other related fact of newsstand life we noticed was that every customer had one hand already occupied, either with a briefcase or a tote bag or a purse or a lunch. Almost no one goes to work empty-handed nowadays. When you think about it, it's a rare moment in the modern American's life when both hands are completely free. Yes, we have backpacks and messenger bags, but those simply allow us to turn ourselves even more into pack animals. Add to the mix a mobile phone, a coffee cup or the occasional ice cream cone, and in most commercial settings, at least half the people you see are moving with only one hand

free. I might even venture to say that finding yourself with both hands free is a little disconcerting, as we immediately think we've left something behind.

The second (and kind of seminal) observation we made was painfully simple: Since 90 percent of us are right-handed, we use our left hand for carrying stuff, or our left shoulder for a shoulder bag—which frees up our right hand for grabbing. Pause for a minute. Let's assume you're reading this book while sitting in an airport waiting to board a plane. As you stare at the concourse, take a quick poll of right- versus left-handed luggage or briefcase carriers. It should be about six to one. The reasons why we might carry a bag in our right hand may be based on weight, size or some other environmental factor. Eliminate those, and the ratio might be even bigger. So whether you're selling newspapers, trying to get someone to pick up a brochure or designing the check-in desk at an airport or rental car location, a right-handed bias has significant implications (apologies to all you southpaws out there).

The final factor in our study was the stand itself, which was of typical design—a low shelf where the day's newspapers went, above which were racks for magazines, above which were shelves holding candy and chewing gum and mints, and inside the circular structure, above it all, the cashiers.

Thanks to the videotape, we could break each transaction down into its smallest components. Here's what we saw: Carrying your briefcase, you'd approach the stand, bend and pick up, say, a newspaper. Then you'd straighten up and brandish the paper so the clerk could see your choice. At that point you'd either put your briefcase on the floor or you'd put the paper under your briefcase arm, and, with your free hand, you'd hold out the money. (If you were a last-minute type, you'd have to reach into your pocket, find the money, and hand it over.) You would then stand tilting slightly toward the clerk, waiting with free hand outstretched for your change. The change goes into the pocket and you pick up your briefcase—or the paper goes from the briefcase armpit to the free hand—and then you turn and depart, squeezing through the rest of the throng trying to buy something.

The stand's designer obviously believed that the best possible

structure was the one that displayed the most merchandise. Maybe the stand's owner believed that, too. But from the customer's point of view, the design was all wrong. There should have been a shelf at about elbow height—someplace where customers could rest their briefcases or purses or purchases while digging out their money and waiting for change. A counter, in other words.

Instead, the only shelf was at about shin height, which displayed newspapers just fine but turned each transaction into an awkward ballet starring a tilted one-handed commuter. As a result, the typical purchase involved more steps than were needed and so required more time to complete—even split seconds add up—which in turn limited the number of transactions possible during rush hour. Which caused congestion, scared away customers, and ultimately cost the newsstand sales. A better design—one that took human anatomy into consideration—might have displayed less merchandise but accommodated more customers.

Almost thirty years ago, when I presented that study to a bored audience of newsstand executives, I got back the blankest of stares. Sometimes I wonder today whether if I'd taken it several steps further and done a calculation on lost revenue, or did a simple sketch and proposed a test, I would have gotten any more traction. In retrospect, one of the most important things to learn is this: How you present your ideas and information is just as—or more—important as the ideas themselves. Our present-day maps, charts, diagrams and Photoshopped pictures, along with video clips, help frame what we do and what we think our clients can do with this information. I believe passionately in edutainment—whether in front of a business audience, a classroom of students or a crowd of parishioners at church. Laughter and knowledge combined make up one powerful cocktail, and if you can mix in some pictures and images, all the better.

We've done studies on fast-food restaurant drive-thrus and worked out the same equation. The speed of transactions is especially important at drive-thrus because the line of cars is so much more apparent to potential customers than the line inside the restaurant. Particularly in North America, where the steering wheel is on the left, we use our left hand to grab our burger and fries and pay at the payment and pickup

window. A ten-second reduction in average transaction time during a busy lunch rush contributes almost immediately to the bottom line.

That woman I began this chapter by describing could have been shopping at a big discount drugstore like Walgreens. It was during a study we did for one such chain that we thought of one simple but very effective solution to the hand shortage.

The eureka moment came on a sultry August night in my office as I listened to the Yankees on the radio and watched videotape of people shopping in the drugstore. I was viewing footage from the camera we had trained on the checkout line, witnessing a shopper trying to juggle several small bottles and boxes without dropping any. That's when it dawned on me: The poor guy needed a basket.

Why hadn't he taken one? The store had plenty of them, placed right inside the door. Maybe people don't associate drugstores with shopping baskets. Perhaps they come in thinking they need just one or two items and only later do they realize they should pick up a few more things. The biggest culprit, of course, was the decompression zone—the baskets were so close to the entrance that incoming shoppers blew right by without even seeing them down there. I immediately began to scan all three days' worth of checkout line video and saw that fewer than 10 percent of customers used baskets, meaning there were quite a few amateur jugglers shopping at the store. And I thought, *If someone gave these people baskets, they'd probably buy more things! They wouldn't buy fewer items, that's certain.* But here we were, allowing the arm and hand capacity of human beings to determine, ultimately, how much money they spent.

We suggested that all drugstore employees be trained to offer baskets to any customer seen holding three or more items. My drugstore client gave it a shot. And because people tend to be gracious when someone tries to help, shoppers almost unanimously accepted the baskets. And as basket use rose instantly, so did sales, just like that.

We've made a direct link over the years between the percentage of shoppers using a basket or a cart and the size of the average transaction. Want people to spend more money? Make sure more of them are using a shopping aid of some kind. For a while the merchant community got

the message but didn't quite grasp the subtext. What happened is the carts got bigger. From Wal-Mart and Target to Carrefour and Auchan in Europe, grocery carts swelled in size. In 2006, we noted that all across the world, whether in supermarkets, hypermarkets or mass merchant stores, the number of people using carts and baskets declined. "I'm just running in for a few things," people told themselves. Not taking a cart or a basket became a way for the customer to define his or her mission. And if customers were just running in for a few things, they didn't want to drive a Mack truck (read: large cart) up and down the aisles of the store. The problem was that shoppers picked up a few things, then found themselves face-to-face with the wine aisle, and look! there was their favorite pinot grigio on sale, two for one, and . . . now what do they do?

Our answer? Give customers a shopping aid strategy right at the door, when they first come in. Cart or basket? Then place other shopping baskets at strategic locations throughout the store. If no one bites, try another location. (We also recommend getting away from those Little Red Riding Hood plastic baskets. A great basket is one that a customer wants to either buy or steal. In this case, neither applies. Plastic baskets are clumsy and not very attractive, and for guys who don't see themselves making their way to Grandmother's house, they're almost an affront to masculinity. Plain and simple, we just need a better basket.)

Quite a few malls and stores have added carts with definite kiddie clout. You get the basket on top, while your junior Dale Earnhardt gets to sit in a model racing car below.

Earlier this year I was reviewing a new prototype Spar store in a train station in Milan, Italy. Spar is a European convenience store chain, like 7-Eleven in the U.S. You find them throughout Europe and in many emerging markets that were once European colonies. I was there with the president of Spar Italy. It was a good store. All across Europe, food-shopping in commuter train stations has taken a massive turn for the better. While the food offerings at Grand Central Station in New York are impressive and very high-end, and the small farmers' markets that have attached themselves to the BART stations in the East Bay of greater

San Francisco are a step in the right direction, the food offerings at the Gare du Nord in Paris, Helsinki's Central Railway Station in Finland and almost any train station in Japan put their North American counterparts to shame. They're good, affordable and generally fast. In a train station, however—unlike an airport, where we shop because we're trapped—speed is critical. As a customer, your train is coming any minute, and you need to get in and out. But from the merchants' standpoint, what's important is to build the ticket or transaction. Thus, anyone shopping without a shopping bag can only buy so much.

The president and I spent about an hour walking through the Milan Spar. As I say, I liked the place a lot. It had great vegetables, a juicing operation and a small bakery. Problem was, all of the baskets were clustered by the front door. He asked me what the store could do to increase performance. "Watch me," I said. I grabbed three baskets and moved through the store. Each time I found someone with their arms full, I offered them a basket along with a nice smile. No one turned me down.

There are moments in this business when you see the lightbulb flick on in people's minds. You can kick around simple ideas all you want, but watching one happen in real time brings it all home. I'd seen the president smile over the course of the hour we'd spent together. But at that moment, for the first time I saw him *grin*.

As the science of shopping evolves, my number-one worry is that as we fall further in love with technology—with that sensor on the shopping card, with the software package that hooks up to a store's closed-circuit cameras—merchants get duped into believing that sitting behind a desk staring into a computer screen is an acceptable replacement to getting out on the floor and taking a good look.

In a very successful bookstore near my office, a pile of shopping baskets sits in the usual erroneous place—in a corner just inside the door. Judging by where the baskets are kept, you'd think that retailers think that shoppers enter bookstores saying to themselves, "Well, today I plan on buying four books, a box of arty greeting cards and a magazine, and so first thing I will take a basket to hold all my purchases." But common sense tells us that people don't work that way—more likely somebody walks in thinking about one book, finds it, then stumbles over another

that looks worthwhile. In such moments the very heart of retailing lies. For many stores, add-on and impulse sales mean the difference between black ink and red.

Anyway, when our book shopper stumbles upon a second worthy volume, she then begins wishing she had a basket to make life a little easier. And if at that exact moment a basket suddenly materialized—in plain sight and easy to reach *without stooping*—then she would probably take one, and then, perhaps, go on to buy books number three and four. Maybe even a bookmark.

The lesson seems clear: Baskets should be scattered throughout the store, wherever shoppers might need them. In fact, if all the stacks of baskets in America were simply moved from the front of the store to the rear they would be instantly more effective, since many shoppers don't begin seriously considering merchandise until they've browsed a bit of it. The stack should be no lower than five feet tall, to make sure the baskets are visible to all, yes, but also to ensure that no shopper need bend down to get one, since shoppers hate bending, especially when their hands are full. A good, simple test on placement is that if you have to keep restocking a pile of baskets through the day, it's probably in a good place.

The baskets themselves also need to be rethought. This bookstore uses shallow, hard plastic ones with hinged steel handles, the same as supermarkets and convenience stores offer. They're perfect if you're buying bottles, jars or crushable items but make no sense for books, office supplies or clothes. When the contents grow heavy the handles become uncomfortable in your hand, but you can't sling the basket over your arm or shoulder, as common sense might wish you could. As a result, you don't want to let that basket get too full. How do we usually carry books? In bags, tote bags especially. A rack of canvas or nylon tote bags would be much better here and would have the added advantage itself of being salable merchandise. The clerk could unload the bag, total up the damages, ask if the customer wants to buy the tote and then reload everything and save on plastic to boot.

The cleverest use of baskets I've seen yet is at Old Navy on Seventeenth Street in Manhattan. While the Old Navy chain has had its ups and downs, whoever manages this particular store does a great job.

I take visiting retailers there—it's one of the liveliest, most energetic shopping experiences in the city. As soon as you step inside there's a gregarious, smiling employee greeting you and proffering a black mesh tote bag to carry your purchases. The bags are cheaper, lighter and easier to store than plastic baskets, and they look a whole lot better, too. In fact, when you bring yours to the checkout, the cashier will ask if you want to buy the bag, and a fair number of people say yes, adding one final sale at the last possible moment.

The least clever use of baskets was one I witnessed in a Southern department store during the Christmas season. There was a large rack of mesh totes perfectly positioned just inside the entrance. But some merchandising wizard decided to place in front of it an even larger display of stuffed Santas—rendering the bags totally invisible to entering shoppers. (Exiting shoppers saw them just fine.) I don't know how many Santas were sold, but it couldn't have been enough to offset that bad decision.

When we studied its stores, the dinnerware maker and retailer Pfaltzgraff was already providing baskets as well as shopping carts to its customers. But at the checkout, we noticed that many of the carts were filled to capacity with dishes and bowls and so on. The supersizing of grocery carts was a retail trend Pfaltzgraff hadn't yet acknowledged. The company immediately replaced the carts with new ones that were roughly 40 percent larger. Just as fast, the average sales per customer rose.

One of my favorite stores in the world is Vinçon, a design store in Barcelona, Spain. Every season they redesign their shopping bags. They are often funny, edgy and filled with social commentary. I am convinced that a high percentage of people shop there just to get hold of that season's shopping bag. How many times walking through Chicago or New York City do you see American Girl Place bags? That shopping bag marching happily through a community is a billboard you don't have to pay for.

This all serves as a reminder of one of the most crucial big-picture issues in the world of retailing: You can't know how much shoppers will buy until you've made the shopping experience as comfortable and easy and practical as possible.

There's a rather elaborate way of keeping customers' hands free that I'd love to see some retailer try. This plan would keep shoppers feeling 100 percent unburdened until it is too late—after they've reached the exits.

The idea would be to create a combination coat check/package-call system. Customers could unload all encumbrances as soon as they entered the store. And instead of carrying their selections around with them, they'd instruct sales clerks to dispatch the bags and boxes to the will-call desk near the exit. After a full session of vigorous, hands-free shopping, the customer would head for the door, pick up coat and hat and purchases, and be gone, into a car or taxi or waiting limousine.

In 2006 we started working for the park division of the brewing giant Anheuser-Busch, which operates Busch Gardens and various SeaWorlds across America. In the parks where we worked, the company had a system at every gift store where you could send your purchases up ahead to the main store at the gate. Ride the Flume, get your picture taken (and stamped onto a mug), send it on, then jump aboard the next ride, hands free. Whee! In theory, you could make purchases throughout the park and pick them all up on your way out the door. The problem? Customers typically found out about this service only after they had bought something, and even then it wasn't as clearly explained as it should have been. I wondered how many people moving through the park or browsing the gift stores didn't understand this service—and decided not to buy something, because who wants a personalized beer mug on your lap when you're riding the Tilt-A-Whirl? My point was that Anheuser-Busch needed to spell out this great service right at the park's entrance.

Sometimes even that might not be enough. A souvenir shop that we studied at Disneyland is still working on this problem. There, all day long the store is virtually empty, since visitors wisely don't want to lug their purchases around the park all day. But by 4:30 P.M. it's a madhouse of souvenir lust. A will-call desk was established so that shoppers could buy in the morning, leave the store empty-handed, and then drop by the will-call desk to retrieve their purchases at day's end. The only problem is that a great many shoppers forget to come by for their purchases.

My fullest vision of such a service was one I suggested to Blooming-

dale's. In the flagship store in Manhattan, the eighth floor is not terribly well suited to selling, due to its hard-to-reach location. So I suggested that the floor be turned into a kind of semiprivate retreat for better customers, complete with attended restrooms, ATMs, a café, a concierge, and other similar amenities—including, of course, the coat check/will-call desk. If shoppers are just visiting New York, delivery could even be made to their hotels. In fact, I envisioned that membership in this semiprivate club could be sold to hotels, which would then pass along the benefits to their guests. This kind of service would actually be most profitable on an even bigger scale. Someday soon a mall or shopping center developer will institute such a system to serve all tenants, doing his part to drive up sales—and, of course, his or her own take, too.

It's hard to overemphasize the importance of the hand issue to the world of shopping. A store can be the grooviest place ever, offering the finest/cheapest/sexiest goods to be had, but if the shopper can't pick them up, it's all for naught. Later I will explain the crucial matter of touch, trial and other sensory aspects of shopping. If shoppers can't reach out and feel certain goods, they just won't buy. So it's not simply a matter of making sure shoppers can carry what they wish to take. They won't even get close to making that decision if their hands are full. It's why, in many cases, flat tabletop displays are better for showing apparel than hangers on racks: It's a struggle to examine something on a hanger if you've only got one hand free, while you can place your burdens on the tabletop and unfurl that sweater to get a good, close look and feel.

The most amusing manifestation of the hand issue was in a supermarket I visited. Like just about every retailer in America today, this market had decided to put in a coffee bar where shoppers could sit and drink if they wished. This wasn't the first coffee shop I'd seen in a supermarket, but it was the first one to truly understand how the whole thing should work: It had also put in cup holders on the shopping carts, meaning that you could drink and drive. That clever little touch sells coffee, I'll bet.

FIVE

How to Read a Sign

Well," he says to me, "what do you think?"

And with that, the marketing executive unveils the sign that's about to go into five hundred or so stores.

I'm seated in a comfortable chair, in a climate-controlled conference room with perfect lighting. The sign is right in front of my nose, at the ideal viewing distance, beautifully printed on expensive paper, which has been exquisitely matted by professionals. There's a kind of hush all over the room.

"Gee," I answer, "I don't know what I think."

Worried glances all around. They're not worried about me—they're worried for me.

"What do you mean you don't know?" the executive asks. "You're supposed to know."

And that's when I try to explain.

I start by saying that unless every customer is going to come upon the sign, or more recently a flat-screen television display, under the exact same conditions that I first saw it, it's impossible for me to know if it's

the greatest piece of communication ever designed or a tragic waste of time, space and money. I attempt to remind everybody that people in stores or restaurants or banks are almost never still; they're moving from one place to another. And they're not intent on looking at signs or flat screens—in fact, they're usually doing something else entirely, like trying to find socks, or seeing which line is shortest, or deciding whether to have the burger or the chicken. And there's that brand-new piece of communication, somewhere in the distance, off at a sharp angle, partially hidden by a tall man's head, and the lighting isn't so hot and there's a little glare coming into the store, and anyway somebody's talking to the customer and distracting her.

In other words, I end by saying, showing me a sign in a conference room, while ideal from the graphic designer's point of view, is the absolute worst way to see if it's any good.

To say whether a sign or any in-store media works or not, there's only one way to really assess it—in place. On the floor of the store.

Even there it's no picnic. First you've got to measure how many people actually looked at it. Then you've got to be able to say whether they looked long enough to read what it says, because if they're not reading it, even the best sign won't work. Now, the difference between an inadvertent glance at a sign and a thorough reading might be two or three seconds. So you can see what kind of challenge this is for our researchers. They've got to discreetly position themselves just so, behind the sign itself, and then watch a shopper's smallest eye movements while simultaneously keeping track of the stopwatch, just to be able to say with absolute scientific certainty that this man focused on that sign for four seconds, and then his eyes shifted to that poster and looked at it for four seconds. We watch shopper after shopper for hours on end, hundreds of people, thousands of minutes, and then assemble all our findings before we can say whether a sign is any good.

Go try. It ain't easy.

But after thirty years of doing this work, we're pretty confident about shooting from the hip, and most of the time we're right. There are some basic rules about typefaces, colors and layout. And we've learned some things as well about how we call "on-location

"communication" interacts with circulation in different environments. But to really measure the success or failure of a sign, we need to put some alphanumeric values to it—17 percent notice the sign; of those, 12 percent bother to read it; and the average viewing time is 2.9 seconds—and the only real way of doing that is to put the thing in place and watch it.

There are companies that will measure sign readability by putting subjects into high-tech helmets that measure the smallest eyeball movements and holding signs before them. But even that won't tell you if you've put the right sign in the wrong place, which happens all the time (and which, by the way, is actually worse than putting a so-so sign in the perfect place). And it surely can't predict whether shoppers will read and respond to a sign on the floor of a store, where distractions abound.

But back to our conference room. The most common mistake in the design and placement of signs and other message media is the thought that they're going into a store. When we're talking signs, it's no longer a store. It's a three-dimensional TV commercial. It's a walk-in container for words and thoughts and messages and ideas.

People step inside this container, and it tells them things. If everything's working right, the things they are told grab their attention and induce them to look and shop and buy and maybe return another day to shop and buy some more. They are told what they might buy, and where it is kept, and why they might buy it. They're told what the merchandise can do for them and when and how it can do it.

A great big three-dimensional walk-in TV commercial.

And just as if scripting and directing a TV commercial, the job is to figure out what to say and when and how to say it.

First you have to get your audience's attention. Once you've done that, you have to present your message in a clear, logical fashion—the beginning, then the middle, then the ending. You have to deliver the information the way people absorb it, a bit at a time, a layer at a time, and in the proper sequence. If you don't get their attention first, nothing that follows will register. If you tell too much too soon, you'll overload

them and they'll give up. If you confuse them, they'll ignore the message altogether.

This has always been so. The main reason it's so important today, as I mentioned earlier, is that more and more purchasing decisions are being made on the premises of the store itself. Customers have disposable income to spend and open minds, and they're giving in to their impulses. The impact of brand-name marketing and traditional advertising is diffuse now because we all absorb so much of it. The role of merchandising has never been greater. Products now live or die by what happens on the selling floor. You can't waste a chance to tell shoppers something you want them to know.

And shoppers are more pressed for time than ever. They're not dawdling like they used to. They've grown accustomed to stores where everything for sale is on open display, and they expect all the information they need will be out in the open, too. Nobody wants to wait for a clerk to point him or her in the right direction or explain some new product. Nobody can find a clerk anyway. Once upon a time you went into a coffee shop and the only thing to read was the menu and the *New York Post*. Now you go into even the smallest Starbucks and there are eleven distinct signage positions communicating everything from the availability of nonfat eggnog to the tie-in with Paul McCartney's latest album.

So you can't just look around your store, see where there are empty spots on the walls, and put the signs there. You can't simply clear a space on a counter and dump all your in-store media. Every store is a collection of zones, and you've got to map them out before you can place a single sign. You've got to get up and walk around, asking yourself with every step: What will shoppers be doing *here*? How about *here*? Where will their eyes be focused when they stand *here*? And what will they be thinking about over *there*? In this zone people will be walking fast, so a message has to be short and punchy—arresting. Over there, they'll be browsing around, so you can deliver a little more detail. In this area they'll be thinking about—oh, let's say we're standing near the motor oil shelf, so they'll be thinking about their cars. So maybe it's a good opportunity to tell them something about replacement windshield wipers. Over here by the registers they will be standing still for a minute and

a half, a perfect window for a longer message. And then they'll be on their way out of the store, but you can use the exit path to give them a thought for the road.

Each zone is right for one kind of message and wrong for all others. Putting a sign that requires twelve seconds to read in a place where customers spend four seconds is just slightly more effective than putting it in your garage.

I'm forever walking around and adding to my mental list of places shoppers stand around doing nothing, where some message might be appropriate. One struck me the other day: In a shoe department, you tell the clerk what you want and he or she goes off to find your size. At that point you've already examined all the shoes, so what do you do? It's probably a good spot for a sign promoting other merchandise. You'd probably welcome something to read right then and there; maybe something about handbags.

One clever placement I've seen lately is the small signs tacked on the inside of bathroom stalls. It almost guarantees a 100 percent capture rate, and it's a place where you can get really creative with the message.

Here's another good spot for signs currently being neglected: escalators. That struck me as I ascended from the tracks on the Underground in London. There you spend a lot of time rising slowly past what used to be signs and are now flat screens. When someone asks me about a good application of digital signage I ask if they've ever ridden the Tube.

It isn't enough simply to figure out the general vicinity where a sign should go. We once studied shoppers who came upon a banner hanging directly over the cash/ wrap area of a store. Good placement, no? No. A very low percentage of shoppers even saw it. Nobody stands around in a store looking straight up in the air. We recommended that the banner be moved four feet away, and the number of people who saw it doubled. When it comes to positioning a sign, the difference between an ideal viewing spot and a terrible one is often just a few feet or a ten-degree angle. For maximum exposure, a sign should interrupt the existing natural sight lines in any given area. So you've got to stand in a spot and determine: Where am I looking? That's where the sign goes. It's no surprise that the number-one thing people look at is other people.

That's why some of the most effective signs in fast-food restaurants are the ones sitting atop the cash registers—more or less at the level of the cashiers' faces. Smart sign placement simply tries to interrupt the shopper's line of vision and intercept her gaze.

Sometimes, though, you've got to get creative with message placement. Lawn mower manufacturing company Toro made an in-store video to promote its automatic-mulching mower. Naturally, they were placing them in home and garden supply stores, but where? In the mower section, where shoppers would see the monitors going but then realize that they'd have to stand still for ten minutes to watch the whole thing, and not only that, but they'd have to stand in the middle of an aisle and quite possibly get mowed down (and mulched) by shoppers on their way to barbecue accessories?

Instead, the video went into repair department waiting areas, where it played before captive audiences grateful for even the slightest distraction. Everyone who visits the repair department of a home and garden supply store is going to buy a new mower *someday*. For some reason, we find that even retailers who pile on the signs elsewhere will fail to appreciate the possibilities for communication in waiting areas, where people tend to be bored to tears. We once studied a car dealership's service area waiting room that offered not one word of reading material—not a single piece of promotional literature. Not an issue of *Car and Driver* or *Road & Track*. Not even an old *Reader's Digest*.

It's no secret that New Yorkers don't like to wait—we want our egg and cheese on a roll almost instantaneously after we order it; if we have to wait any longer than that, we're going to the deli across the street the next time. So I had to appreciate the popular upscale sandwich shop around the corner from my office, which cleverly offers the day's *New York Times* and magazines for varied interests in order to placate the customers, who are often waiting more than five minutes for their made-to-order slow-roasted pork and pickled-pepper relish delicacy.

Nobody studies signs like the fast-food industry. Even if you don't plan on owning a Burger God franchise, it's instructive to see how they do it.

They realize that you can put an effective sign in a window or just inside a doorway, for example, but it has to be something a customer can read in an instant. Just two or three words. We've timed enough people to know that such signs get, on average, less than two seconds of exposure per customer.

I was once asked to evaluate a door sign that had ten words on it.

"How much can you read in a second and a half?" I asked the designer.

"Three or four words, I guess," he admitted.

"Hmmm," I replied.

Fast-food restaurants used to hang all kinds of signs and posters and dangling mobiles in and around doorways to catch customers' attention fast, until studies showed that nobody read them. When you enter a restaurant, you are looking for one of two things: the counter or the bathroom.

There's no point in placing a sign for people on their way to the bathroom to see. They've got more important things on their minds. But a sign facing people as they leave the bathroom works just fine.

As people approach the counter, they're trying to decide what they're going to order. In the fast-food arena, that means they're looking for the big menu board. But they're not going to read every word on it—they're just going to scan until they see what they're looking for. If they're regular customers (as most customers are), they probably already know what they want and aren't even looking at the menu.

If there's a long line, customers will have lots of time to study the menu board and anything else that's visible. After the order is placed, the menu board and counter-area signs still receive prolonged customer attention. McDonald's found that 75 percent of customers read the menu board *after* they order, while they wait for their food—during the "meal prep" period, which averages around a minute and forty seconds. That's a long time, and that's when people will read almost anything—they've already paid and received their change, so they're not preoccupied. That's a perfect window for a longer message, something you want them to know for the next time they come. If we look at the aggregate of all menu board data, from fast food to deli counters in supermarkets,

61 percent of the total time someone spends looking at a menu board is done after they've ordered.

Then they either leave or they go to the condiments. You can place promotional materials over the condiment bar, though it's pointless to advertise burgers there—too late. But it's a good opportunity to tell diners something about dessert. This is a lesson in the logical sequencing of signs and fixtures. There's no point in telling shoppers about something when it's too late for them to act on it. For instance, it's a good idea to position signs for shoppers standing in line to pay, but it's a bad idea if those signs promote merchandise that's kept in the rear of the store.

After the condiment bar, diners go to their tables to eat. A few years ago, there was a move in the fast-food business to banish all dining area clutter—the hanging signs, mobiles, posters and “table tents” (those three-sided cardboard things that keep the salt and pepper company). That was a mistake, it turned out, one that was made because the store planners failed to notice what was going on in their own restaurants, specifically the social composition of the typical fast-food meal.

We tested table tents in two types of restaurants—the “family” restaurant, like Applebee's or Olive Garden, and the fast-food establishment. In the family place, the table tents were read by 2 percent of diners.

At the fast-food joints, 25 percent of diners read them.

The reason for that dramatic difference was simple: At family restaurants, people usually eat in twos, threes or fours (or families!). They're too busy talking to notice the signs. But the typical fast-food customer is eating alone. He's dying for some distraction. Give him a tray liner with lots of print and he'll read that. Give him the first chapter of the forthcoming Stephen King novel, and he'll read that. One of our clients, Subway, was printing napkins boasting of how much healthier their sandwiches were than burgers. Go a step further, we advised—print the napkins with a chart comparing grams of fat. In the seating area of a fast-food restaurant you can practically guarantee that customers will read messages that would be ignored anywhere else. There's an obvious role model: the back of the cereal box.

You can see, then, how a fast-food restaurant is zoned: The deeper in you are, the longer the message can be. Two or three words at the door;

a napkin filled with small type at the tables. I passed a fast-food place the other day with a perfect window sign. It bore this eloquent phrase: **BIG BURGER**. Only when you entered the place did you come upon another sign explaining the details of the teaser. (They were selling . . . big burgers.) That's smart sign design—breaking the message into two or three parts, and communicating it a little at a time, as the customer gets farther into the store. Thinking that every sign must stand on its own and contain an entire message is not only unimaginative, it's ignorant of how human brains operate. It even takes the fun out of signs—I can remember the Burma-Shave (an early shaving cream brand) billboards on the way to my grandfather's farm. It was the sequencing of the billboards that made them such icons of American humor.

This Shave
Is Like
A Parachute
There Isn't
Any Substitute
Burma-Shave

Another lesson in sign language comes courtesy of the United States Postal Service, for which we performed a huge study to help design the post office of today, complete with a self-service postal store and easy-to-use weighing and packaging stations.

In one of the prototype stores we studied, hanging behind the cashiers were large banners promoting various services. Fourteen percent of customers read those banners, our researchers found, for an average of 5.4 seconds each. There were also posters pushing stamp collecting hung on the walls to either side of the cashiers. Fourteen percent of customers read those, too, for an average of 4.4 seconds each.

Which is pretty good in the sign world. And not unexpected, because when you're in line at the post office, what else is there to do? The area behind or to the side of the cashiers is almost always the hottest signage real estate.

The post office also hung signs and installed electronic menu boards

meant to be seen by customers using the writing tables. Those signs were read by just 4 percent of customers, for an average of 1.5 seconds each. Mobiles hanging over the weighing stations were read by just 1 percent of customers, for an average of 3.3 seconds each. Which was no surprise—when you're writing or weighing, you're not reading. Those signs were as good as nonexistent.

Banks also expend a lot of energy trying to figure out which signs work and which don't. Banks, fast-food restaurants and the post office have this in common: lots of customers standing still and facing the same direction—ideal opportunities for communication. The difference is that banks are some of the worst offenders in the art and science of sign placement. I can take you to branches of the world's biggest and most sophisticated financial institutions where placement of merchandising and informational materials is laughably inept. There are church bake sales and kiddie lemonade stands that exhibit better signage sense than some banks I can name. Five minutes from my office is a branch of Citibank where you can find this merchandising innovation: a cheap card table covered by the cheapest blue plastic tablecloth you've ever seen, atop which someone tossed some brochures for car loans and mortgages, joined by a TV monitor, once intended perhaps for showing in-branch videos but now unused and completely covered by a blanket of dust. The table is jammed into a corner in the front of the bank, just a few feet from the customer service desk. It's so bad that it's funny. A lot of bank signage can claim that distinction.

A California bank client decided—correctly—that it would be smart to promote its new free checking policy by hanging outdoor banners visible from the heavily traveled road beyond its door. And then it decided—incorrectly—that the banners should say PLEASE COME IN AND ASK A FRIENDLY BANKER TO EXPLAIN OUR WONDERFUL NEW FREE CHECKING POLICY or something to that effect. Drivers would have had to pull over to read the sign, it was so verbose. On a highway, two words—maybe something catchy, like FREE CHECKING—must be made to suffice.

We did a study for a Canadian bank that had just installed some very sophisticated backlit displays on the customer writing tables. These

exhibits detailed the various services and investments the bank offered.

They were quite beautiful. Nobody read them.

Again, when you're filling out a deposit slip or endorsing checks, you're concentrating too hard to think about anything else. And once you've filled out the paperwork, you race to get into line.

We delivered our sad findings, and the bank's president said, "God, you just saved us from wasting about a million bucks on those damn things." He still spent the million bucks on in-branch media, of course—but on things that would make a difference.

It was also at a bank that we discovered one of our easiest and most effective fixes ever. We were hired to study all aspects of a bank branch, including the large rack that held brochures describing the money market funds, certificates of deposit, car loans and other services and investments offered. The rack was hung on the wall to the left of the entrance, so you'd pass it on your way in.

Everyone passed within inches of it. No one touched it.

Again, the reason seems obvious: You enter a bank because you have an important task to perform. Nobody goes into a bank to browse. And until you perform that task, you're not interested in reading or hearing about anything else. The fact that the rack was to the left side of the doorway, when most people walk to the right, only made it worse.

We took that rack and moved it inside, so that customers would pass it as they exited rather than entered, and we had a tracker stand there and watch. With no other change, the number of people who actually saw the rack increased fourfold, and the number of brochures taken increased dramatically.

Banks aren't the only places where task-oriented behavior must be reckoned with. We enter a drugstore intent on seeing the pharmacist and turning over our prescription, and we don't notice a single sign or display we pass until that mission is accomplished. Then we've got some time to kill, only we're in the rear of the store, and all the signs and fixtures are positioned to face shoppers approaching from the front. Or we've gone to the post office for a roll of stamps, and we're not slowing down until we've secured our position in line. Or we're at the convenience store, hot on the trail of barbecue starter fluid, and

until we're sure they have it, we won't be distracted by anything else. In all those instances, it's futile to try to tell shoppers anything until after they've completed their tasks. So in that drugstore, for instance, two separate signage strategies must be mapped out—one for shoppers walking front to back, and the other for shoppers walking back to front, from the pharmacist to the front.

At a bank client's branch we studied there was a standing rack of brochures located in the general vicinity of the teller lines. But it was positioned a little too far away—customers standing behind the ropes could barely read the brochure titles, let alone grab them.

"Whose job is it to set up the ropes and stanchions and the brochure rack?" we asked the branch manager.

"Well," he said, "the cleaning woman mops up every night, and when she's through she puts all that stuff back on the floor." And sure enough, that cleaning crew didn't know squat about signage.

There's one arena of American life where sign design and placement isn't just a somewhat important issue; it's a matter of life or death. I'm speaking about our roads, especially our interstate highway system. There, signs are almost as important as surface and lighting to maintaining safe, well-ordered conditions. As a result, engineers make sure to get the signage right. The principles seem simple enough: no extra words; the right sign at the right place; enough signs so that drivers don't feel ignored or underinformed; not so many signs that there's clutter or confusion. The fact that you can be driving in a place you've never been and know for sure that you're heading in the right direction—without stopping for directions or even slowing down to read a message—is a testament to the power of a smart system of signs. Having driven all over the world, I can say that the American highway sign system is one of the best. The only one that might be a little better is the Swiss one. At least the Swiss do a better job of trimming the brush on the highway so you can read what's up there.

Look at the most common road signs in the United States: STOP and ONE WAY. A big red octagon with bold white capital letters—what

else could it mean? If you couldn't read it, you'd still stop. ONE WAY is a perfect marriage of words and symbol—you catch it from the corner of your eye and you know what it means. The arrow keeps you going in the right direction without forcing you to slow down or even pause to read it. On the road we use a vocabulary of icons, the universal language that tells us what we need to know without words. When you see a sign with a gas pump, or a fork and spoon, or a wheelchair, you understand at a glance. That's the best way to deliver information to people in motion. Also on road signs, the technical aspects are usually perfect—the color combination provides enough contrast, the lettering is large, the lighting is good, and the positioning is just so.

Back in my urban geographer days I took part in a study of the directional signs in the underground concourse at Rockefeller Plaza in New York City. Down there you have no bearings except for what the signs provide, so they're very important. On film, we saw how people moved along until they began to worry that they were getting lost, or until they saw a fork up ahead where they'd have to choose a direction. Then you'd see their heads begin to swivel and their pace begin to slow. Just before that spot, then, was the logical place for a directional sign—something to head off their confusion and worry.

We also saw that their main concern was not to bump into other people while walking. So if they had to really scour the area for a sign, or if the type was so small that they had to get really close to read it, or the sign was small or badly placed, walkers would be torn between looking at the sign and watching where they were going. Any time pedestrians had to slow down or stop, we concluded, it was because the signs had failed to do their job. That's what really taught me the similarity between people walking and drivers driving—the best sign in either case is one you can read fast and is positioned so you can read it while moving. And the only way to achieve that, in most instances, is to break the information down into pieces and lay them out one at a time, in a logical, orderly sequence.

Of course, the only way we discovered all that was by watching lots and lots of pedestrians move through the space. Otherwise, all the signage decisions would have been made by the concourse planners

themselves—the only people in the world who *didn't* need signs to find their way around down there.

I'm still trapped in this conference room.

So if I can't get out, I'll make life for this sign as difficult as possible. I'll put it on the floor, leaning against the wall, then I'll take ten paces away and see how it looks. I'll stand practically alongside it and see if it catches my eye. I'll stride by it at my normal pace and see if it registers. I'll turn down the lights. If the sign doesn't work in an imperfect world, it doesn't work. Believe me, real life is even tougher on signs than I am.

We're now arriving at a state of communication overload, and most of the problem is due to commercial messages. Little advertising stickers stuck to your apples and pears are either the cleverest thing ever or the most obnoxious defacement of God's bounty, depending on your point of view. There are too many words telling us too many things, and people are getting mad as hell and they're not going to read it anymore. Even as some opportunities for communication are being missed, many are being cluttered with so many messages that none stands out. One display or sign too many and you've created a black hole where no communication manages to get through.

Here's a personal example. I spend a lot of time waiting for planes in airports, and like most road warriors I work while I wait. Lately, though, my concentration is always being broken by Airport Network—the CNN-produced programming for air travelers. Try as I might, I can't find a way to have it turned off (a few years ago, I saw advertised online something that its maker claimed would allow you to turn off any public TV set, but every time I tried to log on to the site, it was down). Even when I'm the only person in the lounge, it must remain on. And so I quietly burn and vow never to watch CNN again. But there is a place in airports where even the busiest traveler stands around dumbly waiting rather than working: Near the baggage carousel, praying for luggage. There, before the suitcases begin to roll, we're all grateful to get a little Wolf Blitzer.

In general, the state of commercial messages is haphazard. Half of

all signs that are shipped to stores, banks and restaurants never even make it onto the floor, according to one study. All over America, retail managers end long, tiring days by sitting in storage rooms, unloading huge cartons of signs and other point-of-purchase materials sent by a merchandising manager who may never even have seen their particular store. Believe me, those tired, overworked store managers aren't agonizing for too long over which sign goes where.

Once I went to a sales meeting of one of the world's largest manufacturers of carbonated beverages at which they ran a competition between different display manufacturers: How fast could they set up their point-of-purchase display designed for the front aisle of a supermarket? It was pretty comical. The teams were a bunch of twentysomethings clad in Ralph Lauren chinos and oxford shirts with the name of the company embroidered across their chests. The fastest time clocked was about three minutes. When asked for my commentary, I suggested they run the same competition at midnight, when the same teams had been working for twelve hours straight—oh, and it had to happen in a crowded back room under the lousiest possible lighting.

Conversely, once some signs make it onto the floor, it's hell getting rid of them. Every February I make a game of seeing how many liquor store windows still bear holiday-themed displays and signs. It's always quite a few. We once studied a major New York bank branch where bits and pieces of twenty-seven different promotions were all still evident. In a car dealership's window, we once found a sign announcing the arrival of new cars—the *previous year's* new cars.

Some signs are perfectly fine, except they're in places they were never intended to go. You'll pass a drugstore display window and see a stack of cough syrup boxes with a tiny sign showing the sale price, a sign that was obviously meant to go on the shelves, where shoppers are a foot or so away, not in a window facing a busy street. Often, retailers simply ask too much of a sign—more than any sign can deliver. A fast-food chain tested a sign system explaining one version of its "meal deals," then tried to make the signs clearer, then tested them again and fixed them again until they realized that it wasn't the signs that were bad—the meal deals were just too complicated to be explained. The deals were changed

and the signs worked just fine. We did a study for a department store in the South that blanketed the place with signs announcing big discounts. The only problem was that you practically had to be a mathematician to figure out what you'd save. Even the sales clerks had trouble keeping all the percentages straight. That store didn't need signs to explain the discounts, it needed university textbooks.

The world of signs today is actually enjoying something of a renaissance. Just look at what's happened to billboards. Thirty years ago, Lady Bird Johnson was going to outlaw them as part of her American beautification scheme. Today, even in postliterate America, they're our most visually exciting, inventive and clever form of commercial expression. They're more stylish than print ads, hipper than TV commercials and more fluent in the language of imagery and graphics than anything you'll find on the web. Both the iPod and the Mini Cooper have used the billboard to their advantage. Billboards are to print ads what YouTube is to the Internet—the edge of the envelope, the lab for experimenting with new ideas in communication. Technology has given us three-part shifting billboards, video JumboTrons, rotating sports arena message boards and digital menu boards featuring flying french fries. At a fast-food restaurant we studied, a moving digital menu board panel was read by 48 percent of customers, compared to 17 percent for the same menu board—a nonmoving version—tested earlier. Those numbers have held up over many tests we've done comparing moving and nonmoving signs. But there's an underside to this data: While an "activated" sign attracts more than twice the number of eyeballs as a static sign, the amount of time people look at the thing stays the same.

But a sign need not be on the cutting edge of technology to leave an impression. Not long ago I entered the elevator of a hotel in the financial district in New York. On the wall was a mirror, below which were these words: YOU LOOK FAMISHED. And below that were the names and brief descriptions of the hotel's restaurants. I guarantee that sign gets close to 100 percent exposure and that everyone who sees it smiles, then checks in with their stomachs to see if they really *are* famished. A good sign.

SIX

Shoppers Move Like People

Anatomically speaking, the most crucial aspect of shopping is the one that looks the simplest—the matter of how exactly human beings move. Mainly, how we walk.

Now, people move pretty much as their bodies allow them to move, as is most natural and comfortable. This gets tricky only when you realize that a good store is by definition one that exposes the greatest portion of its goods to the greatest number of its shoppers for the longest period of time—the store, in other words, that puts its merchandise in our path and our field of vision in a way that invites consideration. It's fairly simple to measure whether a store accomplishes this or not: We simply chart the paths of shoppers and then determine which parts of the store are going undervisited. We routinely perform an hourly "plot" of a store—on the hour, a tracker quickly breezes through every part of the store, counting how many shoppers are in each. If a store's flow is good, if it offers no obstacles or blind spots, then people will find their way to every nook and cranny. If there's a problem with flow, some flaw in the design or the layout, then we'll find some lonesome corners.

The smart store, then, is designed in accordance with how we walk and where we look. It understands our habits of movement and takes advantage of them, rather than ignoring them or, even worse, trying to change them.

Here's a simple example: People slow down when they see reflective surfaces. And they speed up when they see banks.

The reasons are understandable: Bank windows are boring, and nobody much likes visiting a bank anyway, so let's get past it quickly; mirrors, on the other hand, are never dull. Armed with this information, what do you do? Well, never open a store next to a financial institution, for when pedestrians reach you they'll still be moving at a speedy clip—too fast for window-shopping. Or, if you can't help being next to a bank, you can make sure to have a mirror or two on your facade or in your windows, to slow shoppers down.

Here's another fact about how people move (in retail environments but also everywhere else): They invariably walk toward the right. You don't notice this unless you're looking for it, but it's true—when people enter a store they head rightward. Not a sharp turn, mind you; more like a drift.

One of the questions I'm asked a lot when I travel is, how much of this right-hand bias is based on how we drive? Do people in Japan, Britain and Australia, much less India, have this same drift-to-the-right tendency? Yes, there's a local effect. Go to the Tate Britain art gallery in London. The people circulating clockwise are locals and the people circulating counterclockwise are visitors. Say what you will about the English love of order, but to my eye an English store such as Selfridges or Harrods functions more schizophrenically than any store in New York City, where walking manners are important. All the bad ethnic jokes point to Brits having a history of crimes against nature. However, my British colleagues who teach environmental psychology tell me that if you yell "Fire!" in a dark movie theater, in Britain people will head automatically toward the door on the right. Generally, in retail, the traffic patterns in England mimic how they drive.

Japan? A case unto itself. People from Osaka walk differently than people from Tokyo. In Osaka people waft toward the right, in Tokyo

they waft toward the left. My friend Kaz Toyota, who comes from Nara, a suburb of Osaka, explains the difference this way: In Tokyo people are overcivilized, while the folks in his hometown are more natural and free.

This right-leaning bias is a profound truth about how most humans make their way through the world, and it has applications everywhere, in all walks of life. It took us a while to see this pattern, and ever since we've collected data that bears it out (though not in Japan, apparently). But how can a retail environment respond?

We performed a study for a department store where just to the right of the entrance was the menswear department. And by our count, the overwhelming majority of shoppers in the store was female. Having menswear there meant that women shoppers would simply sail through the section, barely looking at the merchandise, determined to get to their main destination—ladies' clothing—first. In fact, because the front door was in the center of the store rather than to one side, our trackers charted lots of women who walked in, stepped right, looked around and saw that they were in menswear, then veered off sharply to the women's apparel sections on the left side of the store—never again to return to the right side, even to the right rear, where the children's clothing was displayed. Not coincidentally, our track sheets showed that children's clothing was the least-visited section in the entire store; fully half of the main floor was going undervisited due to this error in planning—because female customers never even saw it! An obvious solution to this adjacency mix-up would be to place the children's clothing section at the rear of the women's apparel section, rather than beside the neckties and men's bathrobes.

A similar situation held at an electronics store we studied. There, the cash/wrap was against the left-hand wall, near the front of the store. Shoppers would enter and head right, but then see the register and the clerks and turn sharply left so they could examine the merchandise there or ask where to find what they had come for. In some cases, those shoppers headed toward the rear to browse the displays there, but few of them ever made it back to the right half of the store. They were moving in a kind of question-mark track. To alter that, the register was

moved to the right-hand wall and farther back, about halfway into the store. That then became the main hub of activity. A second area of high shopper interest, a telephone display, was installed on the right wall but closer to the front. The hope was that shoppers would enter, walk right toward the cash register area, and then visit the phone displays. Those adjustments shifted the store around to a configuration more natural to how people move, and instantly, the circulation patterns improved—more people saw more store. Because American shoppers automatically move to the right, the front-right of any store is its prime real estate. That's where the most important goods should go, the make-or-break merchandise that needs 100 percent shopper exposure. That's one way to take advantage of how people move.

Shoppers not only walk right, they reach right, too, most of them being right-handed. Imagine standing at a shelf, facing it—it's easiest to grab items to the right of where you stand, rather than reaching your arm across your body to the left. In fact, as you reach, your hand may inadvertently brush a product to the right of the one you're reaching for. So if a store wishes to place something into the hand of a shopper, it should be displayed just slightly to the right of where he or she will be standing. Planograms, the maps of which products are stocked where on a shelf, are determined with this in mind: If you're stocking cookies, for instance, the most popular brand goes dead center—at the bull's-eye—and the brand you're trying to build goes just to the right of it. (Again, in Britain and Australia, the drive-left-reach-right rule creates conflicts in design that we do not have in North America.)

An even simpler aspect of how people move is the one that raises the greatest number of logistical issues for stores. In fact, this particular peculiarity of human ambulation can be said to render nearly every retail space seriously ill-suited to its purpose. It's this: People face and walk forward.

The implications of this are enormous, only because the normal retail environment is actually designed for those nonexistent beings who walk sideways—sidling like the figures drawn in ancient Egyptian hieroglyphs—rather than place one foot in front of the other. Picture it: If you're walking straight down a store aisle, you're looking ahead. It

requires an effort to turn your head to one side or the other to see the shelves or racks as you pass them. That effort even makes you vaguely uncomfortable, because it requires you to train your eyes somewhere other than where you're walking. If it's a familiar environment (say, your favorite supermarket) and the setting feels safe (wide aisles, no boxes or other obstacles on the floor to trip you up), then maybe you'll turn your head as you walk and take in the merchandise. In a less familiar setting, you'll see less—subconsciously, you've got your peripheral vision on the lookout so you don't trip over a box or a small child and fall on your nose. If, as you walk, a display gets your attention, you may stop in your tracks and look upon it as it was meant to be seen, straight in the eye, as it were. But only then.

This issue is not limited to a store's shelves. On the street, how do you approach a display window? In almost every instance, from an angle—as you're walking toward the store from the left or the right. But most display windows are designed as though every viewer is just standing there staring into them head-on. Which is almost never the case. This comes up regarding outdoor signs, too. Near my office there's a new restaurant that spent a lot of money on a very handsome hanging sign, but instead of positioning it perpendicular to the building, so it is visible to pedestrians approaching from either side, it hangs parallel to it, so it can be read only from directly across the street. Which is how maybe 5 or 10 percent of possible customers approach the facade.

Obviously, that sign could be rehung in an hour and the problem would be solved. Windows can easily accommodate how people approach them: Displays must simply be canted to one side, so they can be more easily seen from an angle. And because we walk as we drive—to the right—window displays should usually be tilted to the left. Such a move instantly increases the number of people who truly see them.

But how can our insistence on walking and looking forward be accommodated inside the typical store? One method is used in almost every store already. Endcaps, the displays of merchandise on the end of virtually every American store aisle, are tremendously effective at exposing goods to the shopper's eye. Almost every kind of store makes use of them—in record stores you'll see one particular artist's CDs or some

discounted new release; in supermarkets there's a stack of specially priced soft drinks or a wall of breakfast cereal. An endcap can boost an item's sales simply because as we stroll through a store's aisles we approach it head-on, seeing it plainly and fully. Endcaps are also effective because you pass them on your way into an aisle, so if you see, say, a mountain of Oreos on the endcap, you'll stock up before coming upon the rest of the cookie display ten feet down the aisle.

Of course, there's a built-in limitation to the use of endcaps: There are only two of them per aisle, one at each end. But there's another effective way to display goods so they'll be seen. It's called chevroning—placing shelves or racks on an angle, like a sergeant's stripes, so more of what they hold is exposed to the vision of a strolling shopper. Instead of aisles being positioned at a ninety-degree angle to the back wall of the store, they're at forty-five degrees. A huge difference, and an elegant solution, too. There's only one catch: Chevroneing shelves takes up about one fifth more floor space than the usual configuration, so a store can show only 80 percent as much merchandise as it can the traditional way. The big question is, will chevroning more than make up for that loss with increased sales? Can a store that shows less sell more, if the display system is superior? I can't answer that. We've suggested chevroning schemes to a number of clients, but no one wants to take the total plunge. It's certain, however, that especially for products that benefit from long browsing time, chevroning works.

How we walk determines to a great degree what we'll see, but so too does where our eyes naturally go. If you can only see a tabletop full of sweaters when you're standing right in front of it, then its effectiveness is limited. If you don't see a display from a distance—say, ten or twenty feet—then you won't approach it except by accident. That's why architects have to design stores with sight lines in mind—they must ensure that shoppers will be able to see what's in front of them but also be able to look around and see what's elsewhere. It's also why printed display fixtures, such as a sign reading **FIVE PRE-WASHED T-SHIRTS FOR \$20.99**, should bear their message on every surface, so no shopper confronts a blank side.

Once sight lines are taken into consideration, retailers must take

care not to place merchandise so that it cuts them off. This happens all the time: A freestanding display is placed in front of wall shelves, blocking whatever's there from the shopper's vision. Or a sign obscures the goods it's meant to describe. Ideally, a shopper should be able to examine goods but then look up and notice that over there, fifteen feet away, there's something just as appealing. It's a pinball effect—the felicitous dispersal of merchandise bounces shoppers throughout the entire store. In that way, the merchandise itself is a tool to keep shoppers flowing. That's how good stores operate: You feel almost helplessly pulled in by what you see up ahead or over there to the right.

We have studied how much of what is on display in supermarkets is actually seen by shoppers—the so-called capture rate. About one fifth of all shoppers actually see the average product on a supermarket shelf. There's a reliable zone in which shoppers will probably see merchandise. It goes from slightly above eye level down to about knee level. Much above that or below and they probably won't see it unless they happen to be looking intently. This, too, is a function of our defensive walking mechanism, for if you're looking up you can't see what's in your path.

This means that a huge amount of retail selling space is, if not quite wasted, seriously challenged. If a store can avoid displaying goods outside that zone, fine. But most stores don't have that luxury. One thing stores can try is to display only large items above or below the zone. It's easier to spy the economy-size Pampers down by your ankles than it is the Tylenol caplets. If the bottom shelf tilts up slightly, that helps visibility, too. Packaging designers can also effectively address this issue. Every label, every box, every container should be designed as though it will be seen from a disadvantageous perspective—either above the shopper's head or below her knees. Packaging should also be made to work when seen from a sharp angle rather than just head-on. We'd see a lot more large, clear type in high-contrast colors if that happened. This also has implications in stores where merchandise is stored on the selling floor instead of in stockrooms. I'm thinking here of computers, telephones, personal stereos and other consumer electronics that are sometimes stacked from the floor to over one's head. The boxes

haven't been designed to be on display, but that's exactly how they end up. That alone should make no-frills packaging—brown kraft paper, no images, little description of the contents—obsolete. Boxes should be thought of as signs or as posters for a product—same as a box of cereal. Typically, package designers will place the manufacturer's name at the top of a label, thereby satisfying corporate egotism, and the product ID on the bottom; but this is exactly the wrong decision if the box is ever stored down near the floor. When it's down there, shoppers will see the brand name, easily but not the description of what is in the box. And since no designer has control over where or how a box is stored, the product ID should *always* be on top, and the label should always look a little like a billboard—clean, high contrast, with a visible image and large-enough type.

Unfortunately, the managers of most companies fail to understand the importance of well-designed packaging. I've battled with young management consultants who can't wave their Wharton MBAs fast enough. They have the spreadsheets, they've crunched all the numbers, but they haven't taken a single look. Among the many pieces missing from business education is an understanding of the fundamentals of packaging and how that affects the brand. In business school, you can take courses in global brand strategy, Internet marketing, category management and so on, but to my knowledge there's no major business school in the world that teaches a course in twenty-first-century printing. Not IMD in Lausanne, not the IESE in Barcelona, not the London Business School—and certainly not Wharton. What we can do with printing presses in 2008 makes what we could do ten years ago seem quaint. Split runs and 360-degree color for starters. Today's technology makes it possible to customize packages for individual stores in different parts of the country. But a digitally-controlled printing press is only as sophisticated as the person making the order. While the graphic designers and the printers themselves know the score, that young gung-ho MBA commissioning the work usually doesn't.

Getting back to the floor, another matter of concern is something we call the boomerang rate. This is the measure of how many times shoppers fail to walk completely through an aisle, from one end to the

other. It looks at how many times a shopper starts down an aisle, selects something, and then, instead of proceeding, turns around and retraces her or his steps. We'll call it a half boomerang, say, when the shopper makes it halfway down an aisle before turning back. Typically, he or she heads down the aisle in search of one or two things, finds them, and then heads back without even looking around (or, if she looks, she doesn't see anything worth stopping for). What do you do about that? The obvious answer for retailers is to position the most popular goods halfway down the aisle. Manufacturers should attempt to do just the opposite—to keep their products as near to the end of the aisle as possible.

But there are also ways to try to keep shoppers interested. One of the newest and most effective of these requires the presence of kids, which is why it's been used so well in the cereal aisles, where Mom and Dad typically want to grab and run. There, we've seen a floor graphic of a hopscotch game work extremely well to nail shoppers down for a while. In one store we studied, the average time kids played on the hopscotch graphic was almost fourteen seconds—a long time to be standing in front of cereal without buying some.

There's one aspect of how shoppers move that most people are familiar with: the quest to get us all the way to the back of a store. Everyone knows why supermarket dairy cases are usually against the back wall: Because almost every shopper needs milk, and so they'll pass through (and shop) much more of the store on the way to and from the rear. That is pretty effective, too, or at least it was, but it also created a terrific opportunity for a competitor. In fact, the convenience store industry exists because of its ability to put milk and other staples into shoppers' hands quickly, so they can run in, grab and go. Lots of new supermarkets now feature a "shallow loop"—a dairy case up near the front of the store, so shoppers can grab and go there, too.

Large chain drugstores use the pharmacy in the same way—that section is almost always on the back wall, so customers will be forced to visit the rest of the store, too. But a special accommodation must be made for those customers, lest the strategy backfire. When shoppers are headed for the pharmacy, they typically have a serious task at hand, and so they're not interested in browsing the shelves of the store on their

way back. Therefore, drugstores must be merchandised from the rear as well as from the front—at least some signs, displays and fixtures must be positioned so they are visible to shoppers walking from the back of the store to the front. It's almost like planning two different stores on the same site, but it must be done because the pharmacy is so effective at pulling shoppers through the store.

In the opening chapter, I mentioned a drugstore that was the location of choice for young mall employees who needed a quick soda during their breaks. To take advantage, the store placed the coolers in the rear, which forced the kids to race in, hurry to the sodas and race back out so they could enjoy their fifteen minutes off. And in fact, those teenagers were never going to buy shampoo or alarm clocks or talcum on their soda runs. So the store humanely decided to move the coolers up front, as a favor to loyal soda drinkers who might have found another, more convenient place to fuel up on breaks.

Still, getting shoppers to the back wall of any store is usually a challenge. The Gap, Aéropostale and Anthropologie—all apparel store chains—put their discount sale products in the back left-hand corner of the store. They've trained their most veteran shoppers to visit the remotest corner of the store. Once they've gotten them to the back, their challenge is to make sure the pathway back to the front of the store is well merchandised and that at least some of the signage is facing the customer going back-to-front.

Wisely, most retailers don't sell their bread-and-butter merchandise from the back wall. Still, every square foot of selling space is equally expensive to rent, heat and light. A store that flows interestingly and smoothly from one section to another will automatically draw shoppers to the farthest reaches. If, from the front of the store, shoppers perceive that something interesting is going on in back, they'll make their way there at least once. A simple solution is to have what amounts to a mandala (like the statue at the far end of a Buddhist temple, meant to entice you further in) hanging on the rear wall, a large graphic, for instance, or better yet, something back there that makes some visual noise, that gives shoppers the sense that something interesting is going on. They may not head there the second they enter, but they'll drift that way, as

if drawn by a magnet. Anything is better than the sense you get in most large stores—that the rear wall is the dead zone.

The front of a store has utmost importance in determining who enters. When RadioShack decided to increase the percentage of women shoppers, it did so in great part by devoting itself to the telephone business. But it made sure to display those phones near the front of its stores, in order to lure those women in most effectively. In fact, we advise some clients to change the front-of-store merchandising several times in the course of a day, to attract the different shoppers passing by. At a mall bookstore, for instance, we realized that in the morning most shoppers were stay-at-home mothers with baby strollers. So we told our client to position books on child care, fitness and family up front. (We also advised that there be enough room for all those strollers to maneuver.) In the afternoon, kids getting out of school ran wild in the mall, so there should be books on sports, pop music, TV and other adolescent subjects. After five P.M. was when the work crowd streamed through, so there should be books on business and computers. And because the mall was used very early in the morning by senior citizens getting their walking exercise, we told our client that before the store closed for the night its windows should be stocked with books on retirement, finance and travel. In fact, the store bought large, cylindrical display fixtures that could be turned around depending on the time of day and which books needed to be shown. Supermarkets are jam-packed up front from Friday to Sunday, and so the space is designed to handle the crush. On Monday and Tuesday, though, it's mellow up there. We've advised clients to turn the area just before the registers into a new selling zone, kind of a small bazaar of impulse items rather than just the usual rack or two.

How often shoppers move through your store is also something to be accommodated. If the average customer comes every two weeks, then your windows and displays need to be changed that often, so they'll always seem fresh and interesting. Here's another example of how design and merchandising must work hand in hand: If windows are made so they are easy for employees to get into, the displays will be changed more often than if it's a pain in the neck. If something about the design makes carrying merchandise into the window a burden, or if

display racks block access to the windows, they'll suffer from a lack of attention, I guarantee.

Some facts of shopper movement can't be turned into universal principles, but they certainly have had their impact in specific environments we've studied. We did a study of a branch of a major family restaurant chain with a location on Sunset Boulevard in Los Angeles. By day the fact that its restrooms were just inside the front door seemed to be perfectly sensible. By night, however, when the street outside came alive with, among other things, the trade of some friendly neighborhood streetwalkers, the ladies' room location was a definite liability. It became a kind of hookers' lounge, a place they could wash, put their feet up and chat a spell between engagements. Not the greatest thing for the rest of the diners.

Some Hallmark card stores feature custom-printed stationery departments, places where brides-to-be can go for invitations and so on. The design of the department, a writing table with shelves for the large stationery sample books, was perfectly adequate. But in one busy New Jersey mall, the station was located in the front of the store, just beyond the cash register, perhaps the noisiest, most populated part of the room. The sole person using it was filling out a job application.

SEVEN

Dynamic

Stand over here. *Behind* the underwear.

What do you see? A couple? How old? Sixties? Anything special? Just your average slightly tubby mom and pop out on the town, at Target or some such place, about to splurge on new briefs for the old guy, am I right?

Hold on—what's he saying?

"Now, where's my size?"

What's she saying?

"Over here."

Now what's he saying?

"I guess I'll just get this three-pack."

Fascinating. What did she just say?

"No, get the six . . . I can wear 'em, too."

Whoa. What kind of weirdness is going on here? I can't even bear to picture it, the two of them rolling around in only their—

Hey, stop that. You just missed an invaluable lesson in the true dynamic nature of shopping and buying. You don't even have to be a

scientist of shopping to figure out what just happened, though if you're a woman it might help, especially an overweight woman, especially an overweight woman whose choices in underwear are limited to styles with thin, biting elastic bands at the waist and the leg holes—an uncomfortable prospect, I can only imagine (reluctantly).

In 2004 I worked on underwear issues across the world—in North America, Europe and Japan. That summer I gave a keynote speech at a gathering of lingerie executives in Winston-Salem, North Carolina. I opened my lecture by saying that as a man who lives with a New England woman, I know much more about lingerie professionally than I do personally. A central global issue in this industry is the difference between underwear designed for sex and that designed for comfort. Most women do not parade around as if they were on this month's cover of the Victoria's Secret catalog. While some underwear for some women are items they put on so they get help taking them off, underwear for most people most of the time is about how good it feels and whether or not it complements what they're wearing on top of what they're wearing underneath. Underwear if you are eighteen is a fashion accessory, not unlike hair color. But comfort and fit are seminal drivers for most post-forty women, especially those carrying a few extra pounds.

Since that event, which happened a few years back, women's underwear styles have come to resemble men's, with their wide, flat (nonconstricting) elastic and soft cotton fabrics, thereby solving our woman's particular problem and keeping her out of her husband's drawers.

As of 2008, Victoria's Secret still sells the pink frilly stuff, but relative newcomer Gap Body carries the more athletic and comfortable stuff, or what some in the industry cynically call the butch lines. What we're still missing, however, is a powerhouse merchant who's willing to focus on the needs of the mature woman.

On the other side of the fence is an interesting boom in what's called male lingerie. It used to be boxers or briefs. Now any self-respecting underwear section has at least three more styles—boxer-briefs, slips (or the male version of a bikini) and midrise (which sit a couple of inches higher than a bikini). In my dotage I am still your basic briefs guy, but back to our story.

Shoppers make the ultimate determination of how they use the retail environment and the products that are sold in it. Product designers, manufacturers, packagers, architects, merchandisers and retailers make all the big decisions about what people will buy and where and how they will buy it. But then the shoppers themselves enter the equation and turn nice, neat theories and game plans into confetti.

In this particular case, was the general unsuitability of most underwear for ladies of size known to the designers and makers of said garments? Maybe not. Maybe they knew it but didn't know what to do with that information. Maybe they assumed that women wouldn't wear briefs that looked like men's underwear, although, clearly, the general drift in women's clothes has been toward a more masculine ideal. If some underwear executive had been standing in that aisle next to our researcher, maybe he would have realized that this woman was teaching him something extremely important about his own product. Perhaps the revolution in women's underwear would have started earlier than it did.

Then again, maybe not.

Here's another example of shoppers forcing the retail environment to bend to their will. It involves what is perhaps the major issue in the design and furnishing of public spaces: seating.

I love seating. I could talk about it all day. If you're discussing anything having to do with the needs of human beings, you *have* to address seating. Air, food, water, shelter, seating—in that order. Before money. Before love. Seating.

In the majority of stores throughout the world, sales would instantly be increased by the addition of one chair. I would remove a display if it meant creating space for a chair. I'd rip out a fixture. I'd kill a mannequin. A chair says: We care.

Given the chance, people will buy from people who care.

This happened in a large, well-known women's lingerie store. One that was providing insufficient seating for the men who wait for the ladies who shop. How do we know it was insufficient? Because the husbands and boyfriends were led to improvise, which human beings will always do when a need is going unmet. Whenever you encounter

shopper improvisation in the retail environment, you have found poignant evidence of one person's failure to understand what another person requires.

If I may digress for a good illustration: In the casino-hotels of Atlantic City, where kindness is, shall we say, not excessively idealized, you see lots of people who have wagered and lost but must linger until their tour buses depart. The casinos, for obvious reasons, wish these people would wait in the gaming area, parked in front of a slot machine or a dealer. To encourage that, there are no chairs in the hotel lobbies. How do the visitors respond? They sit glumly on the floors, dozens and dozens of sour-faced losers in a row, not a sight that evokes the opulent gaming ambience of Monte Carlo for the incoming suckers. These people need chairs!

In lingerie stores, too, the need is plain. While women shop, men wait, and when men (or women) wait, they prefer to sit. Is any truth truer? Is any nose on any face plainer than that fact? Still, designers of commercial spaces screw up royally when it comes to seating. In my days as a scholar of parks and plazas with the Project for Public Spaces, we spent a great deal of our time thinking about how to improve outdoor benches—where they should go, how wide they should be, whether they should be in shade or sunlight, how close they should be to the main thoroughfares, whether they should be wood or stone (stone gets awfully chilly in winter). A bench, we realized, might actually double the distance an older pedestrian could cover—someone might walk a while, tire slightly, and consider turning back, but then there'd be an inviting bench in the shade. Once restored, the pedestrian would continue forth. In the retail environment, a chair's main purpose is slightly different: When people go shopping in twos or threes, with spouses or children or friends along for the trip, seating is what keeps the nonshopping party comfortable and contented and cared for and off the shopper's back.

In that lingerie store, the womenfolk were shopping but the menfolk were not—they were waiting for the womenfolk. They'd have loved a place to sit, but this store chose not to provide it. Why not? Maybe there wasn't enough space for chairs. Maybe there was a chair and it broke.

Maybe somebody decided that a bunch of guys hanging around would spoil the decor.

Did that mean the men would stand, or lean? Of course not—it meant they'd invent seating. In this case, they gravitated toward a large window that had a broad sill at roughly the height where a bench would be. And the sill became a bench.

And where exactly was this ad-hoc bench? Through no one's fault or design, it was immediately adjacent to a large and attractive display of the Wonderbra, the architectural marvel that gave life such a lift. It seems easy in hindsight to predict what happened next: Women approached the display, began to study the goods, and then noticed that they were being studied by the guys on the windowsill. On the day we visited the store, there were two elderly gents loitering there, unabashedly discussing the need for Wonderbras of every woman who was brave enough to stop and shop.

Did I mention that no Wonderbra was purchased while those two codgers sat there?

Now, everyone knows that adjacencies are of huge importance to every product, especially something like the Wonderbra, which requires a little examination and consideration and then a try-on. Great retail minds churn themselves into mush trying to unravel the mysteries of which products should be sold near one another for maximum spark and synergy. And here, completely without intention, a very bad adjacency was created (bad for the shoppers, bad for the store, not so bad for the guys) by human beings who were forced by a retailer to improvise.

We've tried to organize the seating idea by calling it short-, medium- and long-term parking. Short-term parking is outside a dressing room. It's designed for the bored wallet carrier, surrogate security guard or two-legged dog to be parked for three minutes. Medium-term parking is the chair at the doorway or bench immediately outside the door, where the guy, the guard and the dog can be left for ten minutes. Ideally, medium-term parking is designed as a perch for people-watching, not too close, though, so that muttered comments can't be overheard. We find long-term parking in a shopping mall. It's quiet and restful. Sometimes