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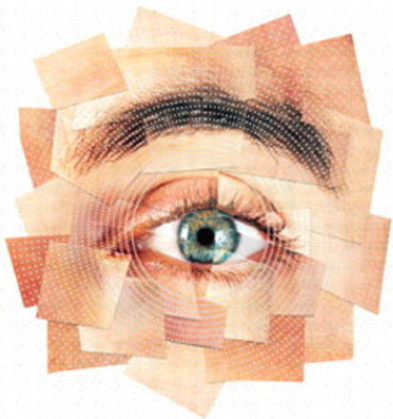
THE SCIENCE OF RETAILING

HERB SORENSEN

Preface

Rethinking Retail

"When you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind."

—Lord Kelvin

T he supermarket is my laboratory. After earning my Ph.D. in bio-chemistry and working for a brief period in the food industry, I traded a lab bench for the aisles of the supermarket. At that time, the supermarket was a black box. Manufacturers and retailers were concerned about how to get shoppers into the door and make them aware of products before their trips, but they assumed that they understood what happened when the shopper was inside. Our research, discussed in this book, shows that in many cases they were wrong.

In the early 1970s, I left my practice as a board-certified clinical chemist and started a small laboratory providing a range of services, primarily to the agricultural and consumer packaged goods industries. One of the services that we provided was sensory evaluation—consumer taste test surveys. Following the example of universities, our "tasters" were college and university students. I initially started doing in-store research because a client said that he didn't think the opinions of college students, with their well-known penchant for pizza and ramen noodles, were very representative of typical supermarket shoppers.

Being a scientist, rather than a market researcher, it never occurred to me *not* to interview supermarket shoppers. I approached the manager of a local supermarket, and he readily gave me permission to interview his shoppers. Remember, this was more than 30 years ago, and the local

Albertsons manager had an amazing degree of autonomy. When we were in the store, we found that there were many other interesting questions to study.

I pursued the in-store research niche—first as a solo consultant and then as the founder and president of Sorensen Associates, "The In-store Research Company®," and more recently, as Global Scientific Director, Retail and Shopper Insights at TNS, a global research and information services firm. We are now a part of the even larger conglomerate WPP, with a focus on advertising and communications. Although most of our experience is with supermarkets and brand manufacturers of fast-moving consumer packaged goods, we have found our core insights hold for work with supercenters, drugstores, convenience stores, auto parts retailers, building centers, consumer electronics, phone stores, and many other retailers or products. We have completed studies in a variety of channels on every continent except Africa and Antarctica, and the paradigm, metrics, and insights are as relevant elsewhere as in the U.S. (with some differences, as we will examine later). Over the years, we came to appreciate the value of conducting research in the store environment, rather than just doing research about the store, products, and shoppers.

We decided to study what shoppers actually did in the store, what they looked at, how they moved through the store, and what they bought. We examined strategies that could be used to increase sales, testing these approaches in the laboratory of real stores with actual shoppers. We traveled with customers down thousands of miles of supermarket aisles and analyzed millions of hours of shopping to help retailers create more effective stores and approaches. We found that simple interventions could have dramatic effects, but only if you understood how shoppers think. And some widely used strategies have little impact on the behavior of most shoppers, so we also helped retailers stop throwing money away.

As a pioneer in the field of in-store research, I have had the opportunity to see retailing go through many changes—including the emergence of new technologies and online retailing. As the industry continues to change, however, the basic insights from our research continue to hold true. And in a more complex and dynamic environment, understanding shopper behavior may be even more important.

I have spent millions of dollars of my own money doing some of this research, and the world's top brands and forward-thinking retailers have spent millions more on specific projects and PathTracker® studies. We

have looked at every square-inch of these stores and analyzed millions of shopping trips on a second-by-second basis, using the best technology at our disposal. The results, to the extent that the information is not proprietary, are contained within the covers of this book.

I am grateful to the many managers who embraced and supported this work, even when it was unproven. I am particularly fortunate to have worked with Bob Stevens, to whom this book is dedicated. He had recently retired after 40 years in market research for Procter & Gamble, and taught me to go far beyond the product-shopper dimension mentioned previously. This, in turn, led to the development of my current holistic view of the shopper experience, including the invention of the PathTracker® suite of tools, metrics, and a scientific paradigm for the subject of shopping. Finally, I am grateful for the fine work by other pioneers, such as Paco Underhill and Siemon Scammel-Katz.

Along the way, we have faced resistance to this approach. As researchers at one of the largest supermarket chains in the world told us: "We do not interview our shoppers in-store, but conduct phone or Internet surveys of them." Interviewing shoppers outside of the store is like trying to understand the movements of a flock of birds by observing a specimen in a natural history museum. It is shocking to me, but not at all exceptional.

This book offers managers in retail firms, or companies that sell products through retail, valuable insights into what happens to their customers when they walk through the front door of the store. Companies that spend countless dollars getting the customer to this point often look away just at this critical moment, giving scant attention to the "last mile" of retailing. Retailers and brand owners know all about who the people are going into the store, and what they are carrying home from the store, and a lot about what they are doing at home. But I stake my career to a large degree on the fact that they know very little about the *process* that occurs in the store. (As I will consider later, this lack of knowledge might be due in part to the structure of the industry, which means retailers and manufacturers get more out of interacting with one another than with customers in the aisles.) This book also offers anyone who has shopped or wants to understand the shopping experience, research-based insights into the habits of the shopper.

On the following pages, we explore some of the key insights from this work—the quick trip, three moments of truth for the shopper, in-store "migration" patterns, and how to put products in the path of customers through anticipatory retailing. We also look at how manufacturers and

retailers can collaborate better in shaping flow and adjacency to sell more products in stores. In the second part of the book, we offer insights from a series of interviews with executives and experts on specific topics related to in-store retailing: deeper insights on the quick trip, the integration of online and offline retailing, multicultural retailing, and a retailer's perspective on the issues presented in this book. Whether you are running or designing stores, building brands, or merely want a deeper understanding of shopping behavior, this book will challenge the way you look at shopping.

In a certain sense, the shoppers' eyes offer a window into our entire society. As I realized in four decades of this work, retailing is at the cutting edge of social evolution because it brings people and the things they *must have* together. This is where the dreams and aspirations of consumers and the messages of brand owners intersect in a concrete action to make a purchase. If you want to understand our society, taking a trip with a shopper down a supermarket aisle is a very good start. I invite you to join me on this journey through the modern supermarket. I think you will be surprised at what we find.

—Herb Sorensen, Ph.D.

Introduction

Twenty Million Opportunities to Buy

The great obstacle to discovering the shape of the Earth, the continents, and the oceans was not ignorance but the illusion of knowledge. Imagination drew in bold strokes, instantly serving hopes and fears, while knowledge advanced by slow increments and contradictory witnesses.

—Daniel Boorstin, *The Discoverers*, 1993

A woman in her 30s moves through the aisles of a Stop & Shop outside of Boston. She was selected for our study because she planned to purchase dish detergent, one of the types of products of interest to our client. We fitted her with specially designed glasses connected to a device that records her field of vision every 3/25ths of a second and relays it to a computer (see Figure I.1). The glasses also reflect the corneal image of her eyes so we can track exactly what she is looking at in her field of vision as she moves through the supermarket aisles. Instead of *watching* shoppers, we actually *see what they see* and focus on.

After the images are overlaid with crosshairs indicating where her gaze is focused, they are analyzed by technicians in India (see Figure I.2). We know where she went, what she looked at, and what she did as a result. We are not asking her what she did after the fact. We are not just observing her. We are seeing through her eyes. Short of crawling inside her head (and we are actually beginning to do this), this is as close as anyone has ever gotten to understanding the complexity of the shopping experience and what shoppers actually do in their natural habitat. Given that 90 percent of all sensory input comes through vision, understanding what shoppers see offers a pretty good view of their thinking.
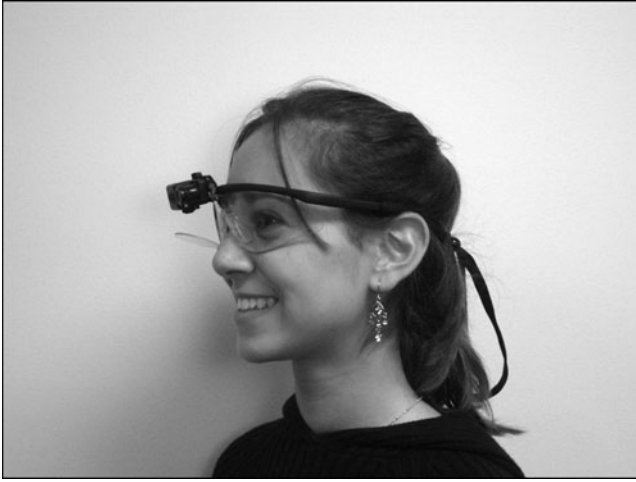

Figure I.1   Specially designed glasses record the eye movements of the shopper as she walks through the store.

Point of focus

Figure I.2   The images from the glasses show the field of vision, and crosshairs indicate the shopper's point of focus at each step, second by second, along the route through the store.

In this one-minute journey (images from the first 30 seconds are shown in Figure I.3), our subject moves quickly past shelves of paper towels, tissues, and napkins, scanning left and right without stopping. She is on a mission. At mid-aisle, she looks at the end cap display on the left. Then, she looks all the way to the end of the aisle, perhaps to get her bearings, scanning the very bottom shelf of the left side of the aisle. She swings her gaze across the aisle to the bottom shelf of the right side, and then moves up along the second shelf. Her gaze zigzags to the top and then to the bottom. She hits a display of brushes and other cleaning products and that breaks her path, so she goes to the left side again. She reaches rows of detergents and stops her cart, scanning rapidly up and down the shelves. Just before she grabs the detergent, she looks down at her cart where a store circular sits on the seat. Could she be checking on the brand in the circular before grabbing the product? She leans a bottle of green detergent forward just before taking it off the shelf. Then, she puts back the green bottle, looks up to the top shelf, and pulls down a pink bottle to put into her cart.

Figure I.3   Images from a 30-second segment of a shopping trip show the shopper checking the end cap, entering the aisle, scanning right and left, and making a purchase. The diagrams below each figure indicate the way the shopper is facing between the two aisles.

This video clip of her passage down one aisle of paper goods and detergents lasts just half a minute. In thirty seconds, her gaze has passed over hundreds of products; she has considered a few and selected one. She has evolved from a visitor to a shopper to a buyer.

I often tell clients that there is a whole book in this one-minute clip. In a real sense, the volume you are holding now is that book.

Twenty Million Seconds: Shopper Time Is Mostly Wasted

Twenty million seconds. That is the time all customers collectively spend in a typical supermarket every week based on our measures across many stores. Each of those seconds is an opportunity to sell. That is 20 million opportunities a week to sell something. But the tragedy of modern retail is that most of those moments are wasted because retailers and manufacturers by and large do not know what the shopper is doing during these moments. Retailers focus on traffic but traffic in itself never buys anything; it is traffic investing time that becomes shopping. We have found that about 80 percent of shoppers' time is spent simply in moving from place to place in the store, not looking at and purchasing items, which means that most of the shopper's precious time and attention in the store is spent *not shopping*.

If we shift our perspective from the shopper to the shelf, the picture is just as bleak. We find that a single item in a store might attract only 300 seconds from all shoppers in an entire week, about five minutes. All those products in a typical store, and they get very little attention. Of course, as we will discuss later, some products get much more attention—not necessarily because of the product itself but often due to its location in the store.

In comparison to that huge number—20 million seconds—the number of purchases on most shopping trips is remarkably small. In fact, the most common number of purchases by a single shopper on most trips is just one. All those seconds, all those products, and the shopper walks out of the supermarket with just one item. Think about it. The average supermarket might stock 30,000 to 50,000 SKUs, and yet this shopper walks past them all to emerge with a single item. In a year, the average household buys just 300 different items. Shoppers are forced to wade

into this thick jungle of offerings to find the handful of precious items that they truly want. We all know the jungle can be a lonely and dangerous place. Many shoppers are lost there.

This is the tragedy of modern retail. The shopper comes to the store to buy things. The retailer creates stores to sell things. Manufacturers create products to sell. Yet most of the shopper's time in the store is spent *not* buying. Shoppers and products long for each other, like Romeo and Juliet, but are held apart by forces greater than themselves. As we will discuss, some of these forces that keep shoppers from shopping are a result of the relationship between retailers and manufacturers, which means that more of the retailer's profits come from brand promotions than from shoppers themselves. This has led to a great emphasis on promotional dollars at the sacrifice of an attention to shoppers. This, in the long run, hurts both retailers and manufacturers, as well as, obviously, shoppers themselves. This relationship is why both retailers and manufacturers have paid far too little attention to shopping behavior. But it also means that there are tremendous opportunities to improve sales and profits by understanding shoppers better.

Table I.1 Lost Opportunities

The Facts	
1 quadrillion	The number of seconds all shoppers spend in all stores, globally, every year (not including automotive)
20 million	The number of those seconds shoppers spend in a single typical supermarket or supercenter in a single week
70 percent	The share of the shoppers' field of vision that is filled with commercial messages, including packages, on average
3 hundred	The number of seconds all shoppers spend in a give store, on average, on any single item, in a single week

(continued)

Table I.1   Lost Opportunities *(continued)*

The Facts	
80 percent	The share of the shoppers' time that is spent navigating the store instead of actually considering items for purchase
3 hundred	The number of different items a typical household buys in an entire year, only about half of those month after month

Brand owners have invested a great deal in understanding consumers outside the store, but how people behave in stores is quite different from what these studies outside show. There is no substitute for watching shoppers in the aisles of actual stores. People do not become real shoppers until they enter the store and cease to be shoppers when they leave the store. Forget what you know about consumers before they walk in the door of a store. Just as examining a military leader's strategy will tell you very little about what actually happens on the battlefield, no amount of shopper knowledge derived from outside-the-store measures will tell you about what will happen in the store. *Shopper insights are specifically about behaviors within the store's four walls.*[1]

> *The tragedy of modern retail is that most of the shopper's time in the store is spent not buying or selling. Of all the products on the shelves, only a small number account for most sales.*

Time Is Money: Shopper Seconds per Dollar

The millions of lost buying opportunities are very important. If we look at the whole shopping trip, the critical issue is not merely sales per visit but *seconds per dollar*. How long does it take shoppers in the store to spend a dollar? Across many studies, I have found a basic principle: The faster you close sales—the less time wasted for the shopper—the more sales you will make. In fact, when we charted this effect across a series of typical stores, we found that the efficiency of the shopping trip was directly related to overall store sales, as shown in Figure I.4. Given this data, does it make sense to force the shopper to walk through the entire store to find a quart of milk, thinking you might sell something else

along the way? Or should you get them buying as quickly as possible and build momentum?

Shopper Efficiency and Total Store Sales

$$y = -0.8349x + 75.909$$
$$R^2 = 0.7319$$

Figure I.4   The faster shoppers spend, the higher total store sales.

As this figure illustrates, time really is money. The more quickly shoppers can make purchases, the greater the total store sales. In this sample, by shaving off 30 seconds per dollar, stores have doubled sales. This means that what goes on inside the store—including how the store is designed and what selection is offered and where—has a tremendous impact on sales. Following shoppers around on the trips through stores can reveal a great deal about how to make stores more profitable.

Leaving Money in the Aisles: The $80 Million Question

Retailers and manufacturers who understand what goes on inside the store can use this knowledge to increase their sales by fivefold. Because the typical supermarket does $10 million to $30 million in annual sales, wouldn't one doing $100 million in sales suggest something beyond extraordinary? In fact, a great deal of my thinking about supermarket design is influenced by the roughly $80 million of extra sales the typical supermarket leaves on the table. A great example of the potential can be seen in Stew Leonard's stores, with their $100 million in annual sales. Although Stew Leonard touts his world-class customer service as the secret of his success, there are two factors that amount to Stew Leonard

dealing himself four aces hand after hand, and then thinking his winning is strictly due to his skill at playing the game. These four aces are founded on bedrock principles of shopping behavior. Stew Leonard's first two aces are the use of a serpentine path, which involves a single wide aisle that snakes its way past the merchandise through most of the store. The serpentine path eliminates the question: Where do I need to go next? You are going exactly where everyone else is going—right down this very wide aisle. This reduces navigational angst for shoppers. The second two aces are the reduction of shopper choice by pruning down his products to less than 2,000 individual items (SKUs) in the store, compared to 30,000 to 50,000 items in "competitive" stores. Stuffing the store with massive choices is unwelcome and unhelpful to shoppers, whereas it may be attractive to brand partners, particularly when what shoppers really want and need is buried in this indiscriminate mass. Although variety may help attract customers to the store, it often creates a barrier to shoppers. Through his store design, Stew Leonard makes sure that the right products show up in your field of vision by the time you get to the checkout. This reduces a second kind of shopper angst: choice angst.

Removing all this angst (choice angst and navigational angst) means that the shopper moves along at a steady pace—I'm told the shopping trip is actually *faster* than in a full supermarket—thinking about nothing except whether to put this or that into the basket. The result of this brilliant plan is an *extra* $80 million of sales each year, all put in the basket one item at a time by shoppers engrossed with nothing but putting items in the basket. No need to look over *huge* quantities of merchandise of no interest to you or your fellow shoppers. No need to "hunt" for anything. This means fewer shopper seconds per dollar and a resulting leap in annual store sales.

This serpentine path is not the only solution, as we will discuss later, but it does illustrate the potential of working with, rather than against, shopper behavior. This recognition of superior shopper strategy, of course, is not to underrate the truly world-class service that Stew Leonard regularly provides to shoppers, to which he credits his success. I believe this is a chicken-and-egg situation. If you are cranking $100 million in sales (admittedly running hard to do it), it's no wonder that you can go more than the extra mile with *all* your shoppers. Trust me, if you delivered Stew Leonard's service in your typical supermarket, you *would* get a significant bump in sales, *but it wouldn't be an extra $80 million!* To get that kind of performance, you have to rethink the total shopping experience.

I'm not surprised that retailers haven't leapt on the Stew Leonard's model. After all, they didn't leap on the Wal-Mart model or the convenience store model. Tesco's Fresh & Easy in the U.S., and the European discounters Lidl and Aldi, are pursuing the limited selection strategy. Echoes of Stew Leonard's model can be seen in HEB's Central Market designs, built on a serpentine model with a side warehouse area to accommodate the missing SKUs of a big store. Stew Leonard's now also has a "warehouse" area on the side, at the end of the trip, where shoppers can browse for those less-needed items. It makes the store more attractive without hectoring the shopper with massive amounts of merchandise in which they have no interest.

Planning Our Trip

On the following pages, we will take a journey through the store—and the mind of the shopper. As shown in Figure I.5, which highlights some key insights from Part I, "Active Retailing," we will consider diverse aspects of this journey, including the rise of the quick trip, moments of truth in the aisle that lead to purchases, migration patterns through the store, principles of active retailing, and the challenge of managing the big head (the few products shoppers buy frequently) and the long tail (the many products retailers stock). Before rolling down the aisle, let us briefly survey the path ahead.
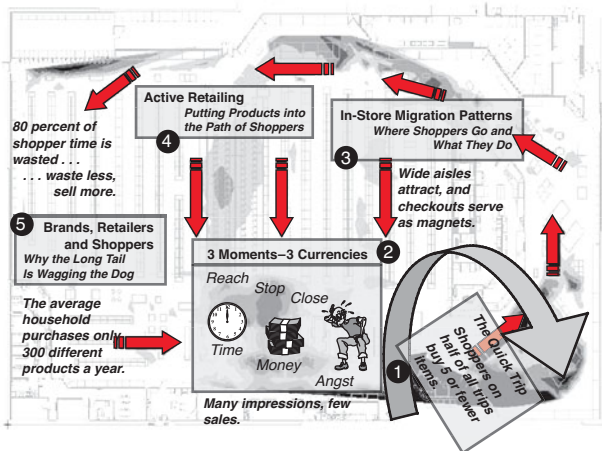
Figure I.5   Planning our trip through the book

Shoppers Make Small Trips to Large Stores

In observing the behavior of thousands of shoppers, letting shoppers group themselves according to behavior, we have identified three primary types of shoppers, as follows:[2]

- **Quick:** As noted previously, the number of products purchased most commonly on a shopping trip is one. These shoppers spend a short time in a small area, with a relatively slow walking speed but high spending speed. A third of all trips to the supermarket result in only one or two items being purchased, with fully half of all trips consisting of five or fewer items purchased.

- **Fill-in:** These shoppers visit about a fifth of the store, have a slightly faster—but still slow—walking speed and an average spending speed.

- **Stock-up:** These shoppers cover a larger area, walk more quickly, but have a lower spending speed.

Although most retail stores are designed for large stock-up shopping trips, most shopping trips are "quick trips," when shoppers buy only one or two items. In fact, shopping trips for 1 to 5 items typically generate a third of dollar sales. This is a mismatch between shoppers and stores that convenience stores have exploited, but other retailers have been slow to recognize. As retailers make bigger and bigger stores, they make it harder for quick trippers. As discussed previously, the average household purchases only 300 different products a year. Shoppers are purchasing these "big head" products—the small group of products that account for most of sales—while stores are stocked to the brim with "long tail" products. Retailers need to limit or manage these long tail products effectively, so they do not confuse or overwhelm the shopper.

One of the most important findings from this work is that quick trippers are *not* price sensitive. This has enormous implications for promotional strategies—many of which are a waste of money. Retailers are throwing away their discounts and coupons: Quick-trip shoppers who account for a large share of purchases are *price insensitive*, so price cuts do not change their behavior. In Chapter 1, "The Quick Trip: Eighty Percent of Shopper Time Is Wasted," we consider these three types of shoppers in more detail, particularly the quick-trip shopper. If half of all trips are quick trips, yet most stores are designed for stock-up purchasers, it is no wonder that stores underperform.

Three Moments of Truth and Three Currencies

Retailers and manufacturers typically focus on purchases and products, but the shopping experience is much richer and more complex. If shoppers, as we have found, spend only 20 percent of their time in-store actually selecting merchandise for purchase, what are they doing with the other 80 percent of their time? In our opening example, we saw how the woman in the Stop & Shop moved through three critical stages of shopping: reach, stop, and close. Her attention was caught by the product (reach), she stopped her shopping cart to look at it but also scanned other products around it on the shelf (stop), and she chose a particular bottle of detergent (closing the sale). These correspond to three in-store "moments of truth:" exposures, impressions, and sales. This is the process by which all in-store sales are made. Although retailers pay the most attention to the purchase itself, they need to understand this entire process.

Shoppers are spending more than money in the store. They are also spending their time and racking up angst. These are the three currencies of shopping. In addition to looking at what shoppers take out of their wallets, we also need to consider what they invest in time and angst in the experience. As we discussed, this angst can come from navigation (making products hard to find in the store) and from choice (overwhelming shoppers with too many choices). To understand shoppers, retailers and brand owners need to understand the entire shopping experience and the three currencies shoppers are spending in the store, as we consider in Chapter 2, "Three Moments of Truth and Three Currencies."

> *Shoppers are spending more than money in the store. They are also spending their time and racking up angst.*

Migration Patterns: Where Shoppers Go and What They Do

In addition to studying shopper segments, we also study the broader "migration patterns" of shoppers throughout the store, as illustrated in Figure I.6. Anchored by the entrance and exit, we observe predictable flows of traffic throughout the store. These flows are very hard to alter—although this can be done, particularly with store design. But you can also understand these flows and use a retail strategy that is designed to meet the shoppers where they naturally travel. This is what retailers do

in deciding where to build their stores—looking for high-traffic areas or intersections of major interstates—but they rarely pay the same attention to actual traffic flows within the store, as we will consider in Chapter 3, "In-Store Migration Patterns: Where Shoppers Go and What They Do."
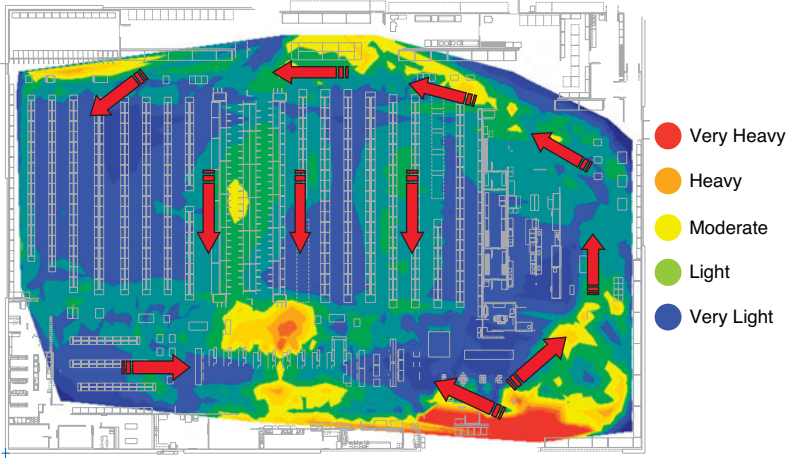
Figure I.6   Shoppers follow predictable paths through the store and some areas (darker shading) receive much heavier traffic than others.

The location of the entrance and the exit, as well as the location of wider aisles, largely defines this flow. Shoppers are used to coming in through a right entrance and making a counterclockwise sweep through the store—and they are somewhat resistant to changing these features as well. On the other hand, once managers understand these patterns, they can use this knowledge to put products in the path of shoppers.

The Holy Grail of Retailing: Taking Products to the Shoppers

We have found that it is hard to get shoppers to go to a specific point in the store, even if you throw money at them to do so. Time-pressured shoppers are less and less willing to invest *time* in the store to go that extra mile to connect with the products. As a result, those retailers who succeed in the future will be those who take control of that final mile in the store, by getting the right merchandise to the right shoppers at the right time. Retailers have to understand *where* the shoppers are spending

their time in the store to make relevant offers where they actually are, rather than frustrate them by making them hunt for products.

Taking products to shoppers in the store represents a fundamental shift from the way most retailers and manufacturers think about retailing. In the early days of retail, shopkeepers actively waited on customers, assisting them with their selections and purchases. Then came self-service retailing. With the advent of the modern supermarket, interaction was no longer necessary, and turning the process over to the shopper reaped tremendous productivity gains. The supermarket became a mini-warehouse for the community. If the shoppers were taking care of themselves, retailers assumed they could take a passive role. Put the right products on the shelves, organize them by category, and turn the shoppers loose to find their way. This passive approach opened the way for smaller convenience stores, pioneered by gasoline service stations, which offered a limited selection of grocery items to customers.

Today, there is no shopkeeper to help customers make a purchase, but there is a different kind of active role for the retailer. It is actively understanding where shoppers are headed and actively making sure that they run into the product(s) they need and you want to sell. This is "postmodern active retailing." Getting products to people when and where they want them in the store is a strategy that requires detailed knowledge and insight of shoppers based on tracking what and where they buy on a trip-by-trip basis. For example, shoppers who buy candy on impulse in convenience stores usually come for a beverage. A candy maker seeking to increase its sales placed its product on the path to beverages and reduced the variety of offerings to simplify the choices. As a result, sales in the category increased by 3.3 percent and brand sales rose by 6.6 percent.

Through my own studies and other research on shopping behavior, I formulated "The Holy Grail of Retailing," as follows:

- To know exactly what each shopper wants, or may buy, as they come through the front door.
- To deliver that to them right away, accepting their cash quickly and speeding them on their way.

This goal reflects a different kind of active role for the retailer. Instead of a physical clerk taking products from shelves and presenting them to customers, the modern retailer takes an active role by superior understanding of shopper behavior and by creating the right store design,

navigation, and selection so shoppers are presented with what they want when they want it. To the extent that retailers can achieve this goal, they will be rewarded in higher sales and profits. We will consider these strategies of "active retailing" in Chapter 4, "Active Retailing: Putting Products into the Path of Shoppers."

Online retailers face similar challenges, such as the problem of the abandoned Internet shopping cart, with a successful sale often requiring the vendor to identify early in the online browsing experience exactly what shoppers are looking for, and then serve it up to them quickly. But just as the online merchant monitors the click-click-click of the online browser/shopper, so too can the bricks-and-mortar merchant monitor the click-click-click of shoppers in the store, assess what they need or might want, and make appropriate offers. Active retailing is as much a state of mind as a set of specific methods or measures. Online is leading the way, conceptually, for what offline bricks-and-mortar retailers must do to gain or keep the leading edge.

Without at least a rudimentary knowledge of these issues—which this book provides—retailers and brand owners have no option but to continue to operate passively within the store. No amount of shopper knowledge derived from outside-the-store measures will do. The modern battle for retail ascendancy will be won *inside* the store. Outside-the-store factors will continue to influence what goes on inside, but they'll contribute less and less to the winners' positions.

> *Active retailing is actively understanding where shoppers are headed and actively making sure that they run into the product(s) they need and you want to sell.*

Retailers and Manufacturers: Why the Long Tail Is Wagging the Dog

The fact that in-store behavior has been largely ignored is not an accident. The structure of the industry means that there is more incentive for retailers and brand owners to look elsewhere. A large share of retailer profit comes from the manufacturers in the form of rebates, slotting fees, and other promotional allowances. U.S. supermarkets derive their profits from four principal sources, listed here from the largest and most important to the smallest and least important:

1. Trade and promotional allowances from the brand suppliers. (Money manufacturers pay to get their products into the store.)

2. Float on cash (accruing interest on cash from sales).

3. Real estate (the appreciating value of property).

4. Margin on sales (often on high-margin departments around the perimeter).

Shoppers only play a role in the fourth source. When these sources of profit, and the inherent nature of self-service, or passive retailing, are made clear, it is not surprising that retailers don't know a lot about the actual behavior of the shoppers in their stores. Why should they? The shoppers have been assigned responsibility for their own shopping and aren't really complaining. This business model may be inefficient, but it is not irrational. (Las Vegas also is inefficient, except in relieving gamblers of their money, but nobody is predicting that Vegas will disappear any time soon.) The retailers are paid by manufacturers to stock many SKUs (the long tail) on their shelves. But if these products are not selling, it is not helping the retailers or manufacturers. The long tail is wagging the dog. Although the long tail can attract customers to the store—because they know they can find whatever they need—it can impede shopping in the store if not carefully managed, reducing sales.

The relationship between retailers and brand suppliers is changing. In the age of mass media, major brand manufacturers dominated retailing. The brands "had their way" with the market. Now, the power has shifted more to retailers, thanks in part to Sam Walton, who made Wal-Mart the largest corporation in the world. Today, the adage: "The brands have all the money, but the retailers have all the power" is at least partly true. The nonautomotive retailing business is a $14 trillion business, globally. Of this, the brands get $8 trillion, while the retailers get $6 trillion. But there are no absolutes. Although retailers *can* forgo major brands, few take that approach. Ol' Roy may be the top-selling dog food brand, but Wal-Mart still sells a lot of other-branded dog food. And remember, even Wal-Mart has highly successful competitors, using other business models.

In Chapter 5, "Brands, Retailers, and Shoppers: Why the Long Tail Is Wagging the Dog," we consider how retailers and brand owners can work together more effectively to manage "flow and adjacency." If shoppers do not buy products in stores, no one wins. This is a compelling reason for the two sides of retailing to work more closely together.

Rapid Change: Online, Multicultural, and Industry Insights

The world of retailing is changing so rapidly that even researchers with cameras and RFID tags on millions of shopper trips cannot gain the full picture. In the second part of the book, we interview a set of experts who offer additional insights on the forces changing retailing. In Chapter 6, "The Quick-Trip Paradox," Mike Twitty of Unilever looks at the quick trip in more detail. In particular, he points out what he calls the "Quick-Trip Paradox": Although most shoppers come to the store on quick trips, the types of products they buy are all over the map, so it is hard to create a "quick trip" selection of products.

While many observers feel that online and offline retailing have little in common, Professors Peter Fader of The Wharton School and Wendy Moe of the University of Maryland note that there are many things that bricks-and-clicks retailers can learn from one another. They explore the insights and opportunities from their research on shopping online and in stores in Chapter 7, "Integrating Online and Offline Retailing." With new in-store technologies, the lines between these two worlds are increasingly beginning to blur. In Chapter 8, "Multicultural Retailing," Emil Morales of TNS Multicultural explores the rise of the U.S. Hispanic market and the implications for multicultural retailing around the globe. In particular, immigrants from developing countries are used to small stores with traditional active retailing, so retailers need to address both the ethnic culture and the shopping culture of these segments. Finally, Mark Heckman of Marsh Supermarkets offers closing perspectives in Chapter 9, "Insights into Action: A Retailer Responds," on the ideas in this book, from the perspective of applying these concepts where cart meets the aisle. The conclusion of the book then examines some of the emerging technologies that are continuing to transform the retailing experience.

Shopping Serengeti

The food industry is the world's largest industry—the African Serengeti of our modern consumer society, an ecosystem teeming with life and activity. You can look at shoppers in a more constrained environment—which makes research much easier. For example, television and online interactions are passive and uni-directional. The viewer looks in one direction and you know what they are seeing (although you also can track where they look on a web page). Shopping, in contrast, is complex

and multidirectional. Shoppers are moving through the environment, changing their gaze, and taking an active role in directing the experience.

The shopping environment is much more challenging to study but offers much more meaningful insights into shopper behavior. Unlike television and the computer, the in-store experience is 360-degrees, 3D, and in living color. It also passes by at blazing speeds. Although researchers may study brand impressions in the laboratory of 30 seconds, if you use eye-tracking technology to see what shoppers see at the point of purchase, it may actually take them only three seconds to decide on a purchase. This fast-paced, sensory-rich interaction also might be what makes the shopping experience so attractive to customers, leading to the surprising endurance of in-store shopping when there are much more efficient virtual alternatives. (Remember when WebVan was going to replace bricks-and-mortar stores?) To understand what shoppers truly care about, you have to spend some time with them walking through the store. It is very hard to understand how to influence behavior in this environment, but we have proven that you can use an understanding of shoppers to increase sales and profits.

In the past decade, there has been tremendous growth in recognition of the value of transaction data associated with specific shoppers through shopper loyalty cards. In fact, what was at the time a very small consultancy, Dunnhumby, assisted Tesco's move up to the position of third-largest retailer globally, by looking at the purchases of individual shoppers, linked to demographics and other characteristics. But these, and other measures such as customer satisfaction, are output measures. They still don't tell us about the process that customers use to shop in the store.

As with the shopper in the Stop & Shop, we know exactly where and how shoppers walked, how fast and how far, where they stopped, where they lingered, and when and where they actually selected an item for purchase, including whether that was in the main category aisle or at a secondary display. We also know how that behavior related to other shoppers, both at the same time and spread over weeks and months.

Understanding how shoppers shop can lead to better designs and strategies that can significantly boost sales and profits. Although we live in a world of Smart Carts and new high-tech approaches, many of which are quite valuable, the insights in this book don't require fancy technology to implement. It took sophisticated technology to generate this knowledge, but implementing it requires primarily a shift from a passive to an

active mindset. The greatest obstacle to this shift in thinking, in the words of Daniel Boorstin, is the "illusion of knowledge." We think we understand what shoppers do in the store. But there are many misconceptions, even by relatively sophisticated retailers and manufacturers. This book offers research-driven insights that can challenge these illusions and shift our thinking, so we can better understand the brave new world of active retailing. This shift in mindset is the true revolution and greatest opportunity in retailing.

Endnotes

1. Of course, some may disagree with this more narrow definition of shoppers as strictly in store, extending their focus to the preshopping experience, as we will see in the interview with Unilever's Mike Twitty in Chapter 6. While this is not to discount the influence of factors outside the store, I believe the dynamics of in-store behavior are so compelling that they shape the shopping experience.

2. Jeffrey S. Larson, Eric T. Bradlaw, and Peter S. Fader, "An Exploratory Look at Supermarket Shopping Paths," *International Journal of Research in Marketing*, 22 (2005), 395-414.

1

The Quick Trip: Eighty Percent of Shopper Time Is Wasted

"I am the world's worst salesman; therefore I must make it easy for people to buy."

—Frank W. Woolworth

In the fall of 2008, Wal-Mart launched a set of small stores in Phoenix, Arizona.[1] With the arrival of these "Marketside" stores, it was clear that even the king of the mega-store was beginning to think small. The move was apparently in response to the arrival of UK retailer Tesco, which had come to the United States with its "Fresh & Easy" small-format stores. Tesco opened dozens of the stores in Nevada, Arizona, and Southern California. Safeway, Jewel-Osco, and many others are downsizing stores in an attempt to upsize profits. Retailers such as Trader Joe's and other specialty stores have also successfully pursued the smaller store model in the age of mega-stores. When Wal-Mart is building smaller stores, it is clear that there is a shift in the winds. At the heart of this change, and the success of these smaller formats, is the quick-trip shopper.

Across the pond, German discounters Lidl and Aldi are growing rapidly in the British market with stores that are a tenth the size of Tesco or Asda stores. The smaller stores offer a faster trip with a more limited selection at lower prices. Although large UK superstores typically stock 32,000 different items, so shoppers are likely to find any obscure product they need to stock their pantries, Lidl carries 1,600 SKUs and an Aldi store sells just 900 items.[2] Aldi, which arrived in the United States in 1976, has more than 1,000 stores. It is rapidly expanding its U.S. presence and competing aggressively against Wal-Mart and Kroger's, using a limited selection and lower prices, as well as very different store designs.[3]

The rapid growth of Lidl and Aldi was aided by a tough economy in 2008, which sent more shoppers looking for discounts. But their success also depends upon an understanding of the power of the quick trip. Most supermarkets are designed for shoppers who are stocking up their pantries, but most shoppers walk out of the store with only a few items. In fact, the most common number of items purchased in a supermarket is *one!*

Three Shoppers: Quick Trip, Fill-In, and Stock-Up

Building on the work of Wharton Professor Peter Fader, we studied data collected on 75,000 shoppers across a series of three stores to develop behavioral segmentation of shoppers. By mathematically clustering a large number of shoppers by factors such as how fast they walk, how fast they spend money, how much of the store they visit, and how long their trips are, we found that shoppers group themselves into three basic segments or clusters, as shown in Table 1.1.

Table 1.1   Quick-trip shoppers spend more quickly than other segments.[4]

Description	Clusters - Market Segments		
	Quick	Fill-in	Stock-up
Share of store visited	11.2%	21.1%	41.0%
Trip duration (in minutes)	13.4	18.5	25.3
Walking speed (feet per second)	0.52	0.66	0.98
Buy time (seconds to buy a single unit)	38.7	30.2	21
Spending speed (dollars per minute)	$1.88	$1.32	$1.23
Efficiency (seconds per dollar)	31.9	45.5	48.8

Each of the segments exhibits fairly distinctive shopping behavior, as follows:

- **Quick:** Short time, small area, slow walk, high-spending speed, very efficient.

- **Fill-in:** Medium time, medium area, slow walk, average-spending speed, modest efficiency.

- **Stock-up:** Long time, large area, fast walk, low-spending speed, lowest efficiency.

Very few supermarket retailers are aware that half of all shopping trips result in the purchase of five or fewer items (these numbers come from actual transaction logs from every continent except Africa and Antarctica). This ignorance is a consequence of the justified focus on the economics of the stock-up shopper, and a lack of attention to the behavior of the mass of individual shoppers in the store. This huge cohort of quick trippers is not a different breed of shoppers. They are simply stock-up shoppers on a different mission.

Anyway you slice it, these quick trips are an important part of retailing. *Single item* purchases account for more than 16 percent of all shopping trips. Further, as noted, half of all shoppers walk out with five items or less, and the average purchase size is about 12 items. As shown in the figure, in addition to looking at the average, we also need to consider the "median," half of the distribution, and the "mode," the most common result (see the box for discussion).

The Danger of Using "The Average"

It is important to have a good understanding of the problems of using "average" data in many shopping scenarios. When we looked at the distribution of the number of items shoppers purchase on typical trips, we saw that the "average" could be grossly misleading, because *one* is the single most common number of items purchased, while half of all supermarket trips result in purchases of *five* or fewer items—the other half, more, of course—but the arithmetic mean number of items is *twelve*. This is because half of the shoppers buying five or fewer items only constitute about a third of store sales, so the much larger baskets, though fewer in number, skew

the share of total store sales. The bottom line is that simply using the arithmetic mean to try to understand shoppers is certain to give an erroneous view. The median (half of the shoppers) and the mode (most) are also important.

Another example that illustrates the problem of averages as applied to shoppers became apparent when we sought to define trip lengths by number of items purchased, rather than by the amount of time spent on the trip. It seemed perfectly logical that shoppers buying fewer items in the store spend less time, and those buying many items would be spending lots of time. This reasoning seemed especially useful based on our earlier efforts to understand how long shoppers spend standing in line at the checkout and elsewhere. For example, it takes a relatively constant 8–10 seconds per item for a shopper to unload her items onto the belt, the checker to scan them, and to get them bagged, *plus* about a constant 90 seconds that is involved in meeting/greeting the checker, handling the payment process, and so on. Of course, this time is all in addition to wait time in the queue, in terms of total checkout time. But the point is, there *is* a relatively constant per item time. So, it would seem likely that a similar relation might exist between total time spent on the sales floor and the number of items purchased.

First, the good news: There is a relation between the number of items purchased and the length of the trip. The bad news is that these are *modes*, not means. That is, they are the most common trip durations for items purchased—but are not the average. For single-item purchasers, rather than the 2 to 5 minutes that might be reasonable, some single-item purchasers stretch this out to 10 or 20 minutes (perhaps waiting for a co-shopper). With each increase in number of items purchased, the distribution begins to broaden. At the dozen "average" number of items purchased, the distribution of trip durations is so broad as to hardly be useful in trying to relate the number of items to the length of the trip. As these examples illustrate, it is important to understand the average, but not get caught in the average quicksand. To understand shopping behavior, we also need to look at the mode and the mean.

But it is not sufficient simply to begin catering to quick trippers. Rather, the store must be distinctly managed for all three types of shoppers, particularly the quick trippers *and* stock-up shoppers. Supermarketers are

obsessed with stock-up trips, because even though there are so few of them, each one is worth a lot of money. But this has led to ignoring the importance of the one- to five-item trip. Even though these are smaller baskets, there are so many of them that they still constitute fully one-third of all the store's sales. What is more, they represent a tremendous opportunity. Although it might be hard to convince a stock-up shopper to put another half-dozen items into a bulging cart, the quick tripper may have a hand free or room in a basket if the right product comes into view. Because the one- to five-item basket is presently generating one-third of dollar sales, simply doubling the size of those small baskets would increase total store sales by more than 30 percent.

But this is not simply about figuring out how to coax customers into picking up a few extra items on trips that continue to look just like the ones they are taking now. Instead, there is a need to understand *distinctly* the three primary types of shopping trips: quick trips, fill-in trips, and stock-up shopping. Those retailers and brands that make a conscious and focused distinction between the quick trip and the stock-up trip will steadily pull ahead in sales and profits.

Rise of the Small Store

When supermarkets failed to respond to the needs of half their shopping trips, others stepped into the vacuum. This led to the creation of the entire convenience store industry and encouraged the growth of competitors with small-store formats. In 2007, for the first time in two decades of expanding superstores, the average size of a grocery store fell slightly. It appears that large retailers are finally waking up to the power of the quick trip.

Many of these smaller stores such as Lidl and Aldi attribute their success to their low pricing. But in addition to offering discounts, they have created streamlined stores that reduce navigational and choice angst. Many consumer studies show that pricing is not the primary factor that drives retail. Giving people money to buy things has to be the least creative way of selling something. As with Stew Leonard attributing his success to superior customer service, the success of retailers might not be for the reason they think. In the case of Lidl, Aldi, and others, our studies indicate that the reduction in SKUs and simpler navigation may play as great a role as pricing in their success.

At the same time that supermarkets were being attacked by the small stores from below, the big box outlets were taking a large slice of the stock-up shoppers. Winning retailers of the future will earn their top-tier status through clearly distinguishing shoppers into quick/fill-in versus stock-up, and serving the two groups distinctly, rather than dumping the whole store together and expecting the shoppers to sort it out. This does not mean, however, that it cannot all be done in the same building.

A Slow Walk on a Quick Trip

It seems counter-intuitive that a quick-trip shopper would walk more slowly than a stock-up shopper. But bear in mind that this "walking speed" is an average based on their total shopping trip—total distance walked divided by total time. The trip itself is composed of time shoppers spend actually selecting merchandise for purchase *and* time they spend cruising from one purchase location to another. The greater the share of their time spent purchasing, the slower the average walking speed.

So, quick trippers have very slow average walking speeds due to their high focus on purchasing, whereas stock-up shoppers have very fast average walking speeds due to the high percentage of their time spent navigating around the store, with an occasional purchase. This is the kind of reality of shopping that is totally missed by researchers studying about shopping but not studying the phenomenon itself.

Perils of Promotion

Given the predominance of the quick-trip shopper, how important are traditional promotions? Promotions are designed for stock-up shoppers, not for quick trippers. If shoppers are only buying a handful of items, promotions probably don't have their desired effect in either attracting them to the store or generating sales inside. In fact, in a 1997 study of 300 randomly chosen shoppers in four retail chains, Glen Terbeek found that consumers were unaware that 51 percent of the promoted items they had purchased were on sale; the discount had no impact on their buying behavior.

Of those 49 percent who were aware of the promotion, 40 percent would have bought the item anyway; 37 percent switched from another brand, and only 23 percent purchased product "incremental" to their regular buying behavior. Terbeek's conclusion: "Trade promotion is unproductive, disruptive, and complex, with a dubious return on investment for anyone. Specifically, hidden costs are higher, and benefits much lower, than participants imagine."[5]

The hidden cost of price promotions is also emphasized by Rui Susan Huang and John Dawes in their paper for the Ehrenberg Bass Institute for Marketing Science. Analyzing 3,000 price promotions, they found that the promotions had a hidden cost: the profit margin forsaken on sales that would have been made at the normal price, which they call the "baseline" volume. In many cases, the baseline volume that is sold cheaply is twice as much as the extra sales arising from the price promotion. As they write, "Plainly, many price promotions result in a price reduction on significant amounts of inventory that would have been sold anyway…. This means that marketers are paying a heavy price for making some extra sales from price promotions—for every extra sale, they are often giving away margin on another two times as much volume (or more). So while many marketing people and trade sales teams say 'price promotions work,' these promotions have massive costs in foregone margin on sales that would have been made anyway, at a normal price."[6]

Of course, as we will consider later, the promotions may have more to do with the relationship between the retailer and manufacturer than the retailer and shopper. Even so, they are ostensibly designed to increase sales and seem to be less effective than expected in this task.

The Big Head and Long Tail

Once the behavioral groups are identified, it is important to match the groups to their distinctive purchases. For the segments identified in this study, the share of shoppers who purchase something from each of the listed categories is shown in Table 1.2. In other words, once shoppers "group themselves" by the behavioral measures, we can look at the resulting market segments to see what they bought, as clues to what we should offer to each group.

Table 1.2   Matching Groups to Distinctive Purchases

Market Segments – Purchases			
Category	Quick	Fill-in	Stock-up	Where to Locate
Beverages – Non-alcoholic	30%	30%	33%	Common to All Segments
Breads/Pastries/ Snack Cakes	13%	19%	35%	
Salty Snacks	14%	18%	21%	
Health and Beauty Aids	14%	11%	14%	
General Merchandise	15%	13%	13%	
Candy/Gum/Mints	18%	14%	11%	
Tobacco	11%	8%	4%	
Frozen Foods	4%	23%	47%	Fill-in and Stock-up
Dairy – Refrigerated	1%	20%	70%	
Produce	6%	11%	68%	
Breakfast Food	5%	9%	21%	
Cookies and Crackers	7%	11%	17%	
Alcoholic Beverages	8%	10%	15%	
Meat, Poultry, Seafood – Fresh	0%	5%	47%	Stock-up Only
Baking/Cooking Supplies	2%	8%	28%	
Paper and Plastic Products	2%	8%	25%	
Dressings/ Condiments/ Pickles/Olives	2%	7%	25%	

Market Segments – Purchases				
Category	Quick	Fill-in	Stock-up	Where to Locate
Canned Vegetables	1%	4%	16%	
Soup	0%	4%	15%	Stock-up Only
Prepackaged Deli-Meats/Cheese	1%	4%	15%	

Given most stores' focus on stock-up shoppers, it is not surprising that they are poorly designed for the quick trip. Stock-up and fill-in shoppers are looking for the same products—just expanding the set. We want to focus on, at most, a few thousand items that are needed to satisfy perhaps 90 percent of shopper needs. Moreover, because we will deliver this merchandise to all shoppers very quickly—near the entrance of the store—we expect them to pay for the convenience. So pricing will not be promotional, but rather we will focus on premium brands, quality, and freshness.

This is not how most retailers think. Warehouses typically offer in the neighborhood of one million different items that retailers could offer for sale in their stores. The retailers have wisely selected a mere 30,000–50,000 items to offer in your stores. But the typical customer's household buys only a total of 300 to 400 distinct items in an entire year. And they buy only about half of those on a regular basis. Those items purchased over and over, day in, day out, week in, week out, constitute a really short list. In fact, 80 items may contribute 20 percent of a store's total sales, with milk and bananas typically vying for the top slot at supermarkets (see Figure 1.1). A thousand items contribute half the dollar sales. (The same phenomenon holds for other classes of trade.) As noted here, those few items generating the lion's share of sales are referred to as "the big head," while those thousands of other items—and they do generate significant sales—are referred to as "the long tail."

Contribution of Single Items to Total Store Sales

Share of Total Store Sales (y-axis, ranging from 0.000% to 1.000%)

Often 2% Milk or Bananas

The Big Head

The *L – O – N – G* Tail . . . . .

Single Item SKUs, Rank (x-axis: 1, 101, 201, 301, 401, 501, 601, 701, 801, 901, 1001, 1101, 1201, 1301, 1401, 1501, 1601, 1701, 1801, 1901)
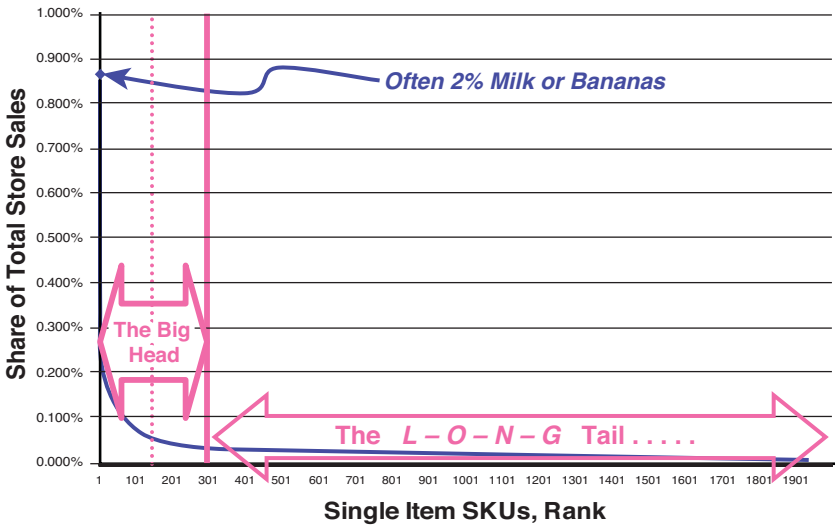
Figure 1.1 Contribution of single items to total store sales

Heads You Win

Winning *always* involves making careful distinctions. There are a few crucial distinctions in retailing that largely define success. This distinction between the big head and the long tail could be the single most important distinction to make in terms of managing the *range* of merchandise that retailers carry. Yet we observe many retailers stirring the two together indiscriminately, in an attempt to sell more of the long tail. Selling more of the long tail is a good idea but not at the expense of penalizing the big head.

Wired magazine editor Chris Anderson has pointed out that online retailing makes the long tail an important business. Online retailers can profitably stock and sell small numbers of niche products rather than only concentrating on the hit products that constitute the largest number of sales. Booksellers such as Amazon can stock an obscure title alongside *The New York Times* bestsellers. The many small sales of these niche titles add up to a large return for the retailer.[7] There is some debate about whether this attractive theory holds true even in the online retail space, as pointed out in a detailed study by Anita Elberse of Harvard Business

School.[8] In bricks-and-mortar stores, however, the case is clear for focusing on the big head.

The reality is that it is easier to increase total sales of the big head than it is to increase sales of the long tail. Focusing on the long tail is equivalent to trying to get more people to shop on Thursday, rather than focusing on how to serve the Saturday crowd better and more efficiently. Slight increases in Saturday performance *per shopper* are worth a good deal more than lots of additional weekday shoppers. In the same way, modest increases in per-item big head sales are worth much more than large long tail sales increases, scattered across the massive range of products. Help your winners to win more and bigger. It will give you the resources to selectively focus on the long tail more appropriately.

Many retailers hide the big head, as shown in Figure 1.2. This is a map showing the exact location of those top 80 items from the big head for this particular store. As expected, there is a significant collection in the produce section—upper right—and in the dairy—upper left. Otherwise, the big head is pretty well scattered about, as the retailer attempts to sell more long tail by "hiding" the big head among those many thousands of items of very limited interest to the shopper.

Figure 1.2   Where the big head is hiding

The net result of this is a very large loss in big head sales, coupled with angst, frustration, or ennui on the part of the shopper. Don't worry: There is an important role for the long tail—and there *are* valid justifications for "SKU proliferation," "range growth," and promotional fees to support the long tail—but killing off sales of the big head is not one of them.

In addition to making it harder for shoppers to find "big head" products, a proliferation of SKUs also contributes to the problem of out-of-stock items (stockouts). Increasing from three SKUs to 10 will not necessarily increase sales because it is harder to manage inventory and avoid stockouts. Roughly 8 percent of store sales are lost due to stockouts, and greater variety increases this risk.

The Communal Pantry

The dominance of quick trips means that retailers are functioning as the communal, neighborhood pantry, offering just what the household needs with emphasis on fresh (quality) products at modest prices.

In the developing world, traditional retailing involves mostly very small neighborhood shops where patrons of limited means purchase only what they need "right now." These customers cannot afford to stock a pantry at home, so the neighborhood market becomes a communal pantry. In other words, it creates community. Small, family-owned stores, some as small as closets, provide their customers with needs on a daily basis. For example, in India, about 96 percent of the retail marketplace consists of small shopkeepers. Across emerging markets, an estimated 80 percent of people buy their wares from mom-and-pop stores no bigger than a closet. "Crammed with food and a hodgepodge of household items, these retailers serve as the pantries of the world's consumers for whom both money and space are tight."[9] In Mexico, despite being one of Wal-Mart's most successful markets, high-frequency stores are still regularly visited by almost three-quarters of the population. Although the average spent is only $2.14 a day, the annual sales total reaches a significant $16 billion.

Small stores catering to the quick tripper in developed markets are also serving as a communal pantry. In this case, the shift is not because of a lack of refrigeration or funds but due instead to a change in lifestyle and a shortage of time. Once the home pantry was the communal focus of the home, but now kitchens have often evolved into a fast-food preparation point to adapt to changing habits, with people grazing, or eating on the

run. The household pantry is thus becoming de-emphasized because more customers would rather pick up quality, fresh merchandise in the local "bodega" or neighborhood market rather than stock a home pantry, even though they could easily afford to. So, in this way, the modern consumer is returning to a "communal pantry." This, of course, has had a consequential effect on buying patterns and subsequently on storage.

So, this is a phenomenon that affects all strata of society, from the rich to the poor: People are visiting stores very regularly, possibly every day, buying what they want when they need it. The retailer takes on the responsibility for warehousing and stocking the essentials that consumers no longer have the space for or desire to stock, and keeps the products fresh and available. This also leads to the homogenization of rich and poor, who visit stores such as Wal-Mart, Costco, and Fresh & Easy. The objective is to have shoppers come in several times a week to pick up dinner, so these stores are essentially acting as a communal pantry.

A 2007 report by Booz Allen Hamilton notes that, after years of hype about "big box" retailing, there is an increasing number of small-format success stories, ranging from convenience stores to discounters to stores that sell basic staples and key grocery items in a cost-effective neighborhood format.[10] The report cites three reasons for the trend. First, consumer experience in massive retail stores is becoming increasingly unattractive. Lower-income shoppers, in particular, are uncomfortable in large stores because of impersonal service and the sheer number of items on offer, which underlines their lack of spending power. Second, smaller stores are no longer necessarily saddled with higher prices or lesser quality. Finally, small formats give retailers the chance to have a more intimate relationship with customers and employees, which provides scope for genuine innovation in store and business model design.

This is a global phenomenon and is leading to the breaking down of the divide between the developed and developing world in regions such as Europe and Latin America—a democratization of retail. As the Booz Hamilton Allen report notes: "In Europe's affluent economies, consumers are looking for convenience items, including meals, to suit their busy lifestyles of single heads of households. Retailing in Latin America, by contrast, is focused much more on low-income and larger families. Part of the explanation for why smaller formats are working in Latin America is that items such as dry pasta, cooking oils, milk, bath soap, and laundry detergent can be acquired in precisely the right quantities for daily use. The stores are, in effect, the *customers' pantries*. [italics added]"

As these smaller stores have begun to sell high-quality items at low prices, they have come head-to-head with traditional, passive retailers. More important, this shift has tremendous social significance for the countries where implemented, because the product quality has a strong appeal to wealthy customers, whereas the lower pricing appeals to low-income customers. This begins to make retailing a new and valuable community builder. Retail is, once again, at the cutting-edge of social evolution.

Layered Merchandising

Given three emerging features of retailing—the quick trip, big head, and communal pantry—retailers need to rethink how they merchandize their stores. The original idea of the store as a community warehouse needs to be rethought. The importance of quick-trip shoppers argues for a different store design, where the "fill-in" and "stock-up" areas should be considered as extensions of the "quick" convenience area, rather than having the convenience area an afterthought in a store designed for stocking up. Other than representing small selections of the categories specified in the second group (fill-in and stock-up) and the last group (stock-up) in Table 1.2, this convenience area should adhere to the same pricing and selection criteria: high-quality, higher-margin merchandise, delivered more conveniently than that in the long tail. Of course, it is easily possible that the "convenience store" area already is embodied in the promotional store, end-caps, and other promotional displays (see "Managing the Two Stores," in Chapter 3, "In-Store Migration Patterns: Where Shoppers Go and What They Do").

The essential element of this merchandising plan is to offer a common area for all shoppers that serves up the merchandise that all segments include in their baskets; then to provide a secondary area that encompasses the first two segments, a third area for the more extended trips that encompass the third segment, and finally, an "everything else" long tail area where a shopper can find almost anything but may need to spend some time looking. The "quick" area becomes the big head portion of the store, where shoppers can spend more dollars per minute (fewer seconds per dollar) than any other part of the store, while the other areas blend into the long tail.

The fundamental concept here is to address explicitly and distinctly the needs of each group of shoppers as they come through the door. Conceptually, this means that retailers should stand at the door of their

stores, call out the first segment, and then ask themselves: How am I delivering *right away* to this group what I know they are going to buy, accepting their cash quickly, and speeding them on their way? The answer to this should be a clear and attractive path that covers all of those items quickly and with clarity—providing just the choices necessary to accomplish the shoppers' purposes.

For each segment that comes through the door, it should seem as if the store was designed just for them. If retailers can stand at the door and know that they are achieving the Holy Grail for the quick-trip segment, they must proceed similarly with the second segment, and then the third. The key is for each segment to sense that the store was designed just for them. And how is this to be done? Through what we call *layered merchandising*.

Layered merchandising simply means that the principal needs of each segment are easily and logically found on as short a path as possible between the entry and the checkout. It creates stores within stores. For instance, say that a five-minute trip, by the nature and number of the items, is required for shoppers to acquire all the items they want or may buy. Remember the treasure hunt on which most retailers send customers in looking for the big head within the store, as shown in Figure 1.3. Treasure hunts might be fun for children's birthday parties, but they are an irritation for a time-pressed shopper.

Yet retailers think that they are cleverly boosting sales and profits by holding the shopper in the store for ten minutes. They should think again. They force the shopper to spend his or her time walking around the store to find items to buy, instead of spending more time buying. Is this frustration worth it just to get the shopper to walk past a few more items? In reality, the shopper is being told, go somewhere else if you want to shop efficiently—here we intend to frustrate you and hinder you to maybe get a little more of your trade. This leads to fragmentation of the channel as needs are met elsewhere. To reverse this baleful trend requires true customer orientation, beginning with understanding the distinctive types of shoppers (segments) coming in the door, and serving each group efficiently through intelligent product placement.

The Right Paths for the Right Shoppers

Layered merchandising allows the retailer to provide *instinctive-distinctive* paths appropriate to each shopper segment. That is, when *all*

shoppers arrive in the store, they intuitively recognize, even if sublimi-nally, that all of their most common needs are right around them so that they can efficiently access the "big head" selections from those categories in their pathways to checkout. Some retailers, for example, put a selection of dairy at the entrance instead of forcing quick-trip shoppers to make their way through the entire store to reach the dairy case. The first seg-ment (quick trip) can proceed to the checkout as soon as its members have shopped the common area, whereas the second, the "medium" group (fill-in), needs to pass through and shop a secondary area that should be welcoming and intuitive to them, and again, conveniently on the path to the checkout. The "long" group (stock-up) needs to pass through a third area before passing through the same secondary area as the medium group did, and then to checkout. In every case, the goal is to provide an intuitive, instinctive path, distinctive to the shopper segment, which delivers just what they need from a preselected, high-margin offering, speeding them to the checkout.

The path outlined here would deliver a high volume of sales to shoppers from the 2,000 to 4,000 items they are most interested in, with no com-promise of margins. Selective margin reductions are reserved as motiva-tion to entice shoppers to look at more complete selections of the specified twenty categories, plus all other categories, in the long tail por-tion of the store. But this approach can only be pursued if the retailer recognizes the different segments, understands what they buy, and designs the store accordingly.

There are other motivations/inducements for shoppers to extend their trips beyond the convenient, higher-margin area. One obvious motiva-tion is to benefit from a much wider selection of merchandise. Both price and selection benefits for the long tail can be advertised in the big head portion of the store, without eroding the convenience of the big head experience. Successful execution of such a communication plan will obviously affect the success of the long tail, without compromising the big head. Retailers need to manage not just the big head versus the long tail, but simultaneously offer the long tail to shoppers engaged in big head purchases.

The problem here is somewhat analogous to managing quick trippers at the same time as stock-up shoppers. As noted before, quick trippers *are* stock-up shoppers, just not on a stock-up trip *at the time.* So the chal-lenge is to *predispose* a "soft drink and personal care only" buyer on this

trip to return to purchase their laundry detergent or other staples *at this store.* This problem is one of connecting a single shopper's quick trip with the same shopper's later stock-up trip.

Purchase Modes and Selection Paradigm

We also need to recognize that shoppers can be in different purchase modes, and this leads to different selection paradigms. First, the modes can be planned or opportunistic. Some purchases are carefully decided based on shopping lists, research, or careful planning. Others are opportunistic, responding to chance meetings with products in the store.

At the moment of purchase, there are also different types of decision making. Some decisions such as repeat purchases are instinctual, not involving the conscious mind. For these, presenting the shopper with the 100 or so SKUs is the most important factor. Other purchases are decisional, through evaluation and selection, so the use of shopping lists or reminders to buy can help to trigger a decision.

There are also two ways that shoppers view purchases within their trips. The first is that the purchase is mostly not pleasurable or fun, but strictly a chore and should be completed as quickly as possible. The second is a hedonic view, where the purchase is pleasurable, and they might enjoy a leisurely purchasing experience for the item.

Spending Faster

The mismatch between store design and shopper segments, particularly the hiding of big head items in the long tail areas, leads to a great deal of wasted time. How much time is only apparent through careful observation of shoppers. We have found through our research that shoppers spend only 20 percent of their time in-store actually selecting merchandise for purchasing. Because pretty much the sole reason a shopper is in the store is to acquire merchandise, and that pretty well aligns with the retailer's reason-for-being, too, this represents a tremendous failure. This means that 80 percent of the shopper's time is economically nonproductive—largely wasted! This single fact has huge implications, because time is money, and we are obviously wasting a lot of it. (This fact lies at the root of my own focus on seconds per dollar as *the* single most important productivity measure for shopping.) Simply making that nonproductive time productive might give retailers *five times* the sales.

One of the things that gives me confidence in these recommendations is that there are actually multiple streams of evidence coming together that all support the observation that an awful lot of sales are left in the aisles. For example, consider the average walking speed of shoppers on different kinds of trips. Counter-intuitively, quick trippers' average walking speed through the store is much slower than the stock-up shoppers. This is a direct consequence of the fact that all the shopper's time in the store can be divided into two buckets:

1. Now I am standing at the shelf, selecting merchandise for purchase, and *walking* very slowly, if at all (<1 ft/sec.).

2. Then I am looking for the next merchandise that I might be interested in buying, and hurrying along trying to find it, walking quite quickly (1–4 ft/sec.).

So quick trippers have a lot less wasted time than the stock-up shopper, and as a consequence spend their money a lot faster. Remember that *shopper seconds per dollar* is one of the key measures of retailing success, so shoppers spending money more quickly ultimately leads to greater overall store sales. As shown in Figure 1.3, the data show that shoppers spend faster on the shorter trip, as a direct consequence of them doing less walking about and more actual acquiring of merchandise. In contrast, a Wharton School study called "The 'Traveling Salesman' Goes Shopping' " highlights the tremendous inefficiency of the typical long shopping trip.[11]

Spending Speed (Typical)
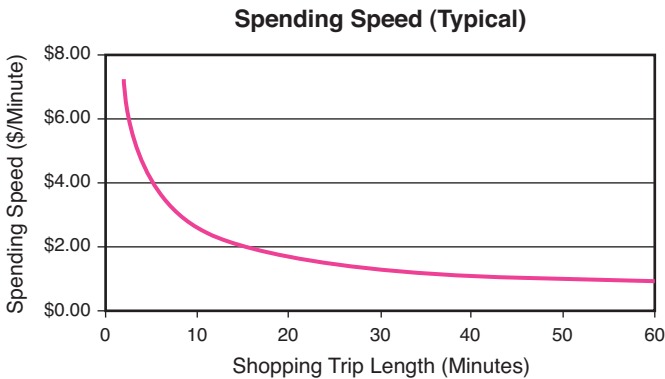
Figure 1.3 Spending speed: Shoppers spend faster the shorter the trip.

As noted in the Introduction, in addition to focusing on the large head, the other massive angst reduction at Stew Leonard's comes from having only one, single aisle, that wends its way through the entire store. This is a wide, serpentine aisle that essentially transports every shopper through the store, introducing them in the same order to all of the merchandise there. This virtually eliminates *navigational angst*. Whereas the typical store is worried about how to get the shopper to the right merchandise—with sales flyers, specials, and flashing lights—Leonard already knows where his shoppers are going and can put the right products in their paths.

For a wide variety of good and valid reasons, everyone is not going to run out and build a "Stew Leonard" kind of store. There are many possible models. The point is not for retailers to copy a simple formula—if everyone is doing it, it becomes less competitive—but to understand the principles that drive extraordinary sales, and leverage those principles in their own operations. In addition to the serpentine design used by Leonard, other effective store designs include the enhanced perimeter, the inverted perimeter, the compound store, and the big head store, as we will explore further in Chapter 3.

Conclusion: Dual Chaos

Matching these diverse segments to a broad set of products—in a way that works for shoppers, retailers, and manufacturers—is a "dual chaos" problem. There are a multitude of types and varieties of people (chaos 1), as well as a multitude of types and varieties of products (chaos 2). The question is how to match the people with the products. In the bricks-and-mortar retailing world, it's not possible (yet) to do an exact one-to-one match. The store cannot be reconfigured to personal tastes every time a shopper walks in the door. As much as retailers might like to customize their stores for every single shopper, this is not operationally practical. So, the best thing a retailer can do is create a "variety" of shopping experiences addressing the distinctive needs of groups of shoppers.

Organizing shoppers into groups is what segmentation or clustering is all about. Although we have considered the three broad segments that have emerged across many retailers, each retailer or store will have more specific insights into how people shop in their stores. There are two general problems of most shopper segmentation. The first is that most of these

schemes result in far too many groups of clusters for practical in-store use. Retailers can respond to a small number of large groups inside the store far more intelligently and in a more targeted way than they can to a large number of smaller groups. However, in defense of segmentation schemes producing larger numbers of groups, these may be effective outside the store, where various advertising media may be targeted distinctly to more varied groups.

The second problem is that most segmentation schemes are based on a wide variety of psychographic and demographic data, which although collected by surveys and other research, are not obviously related to in-store behaviors. The goal of the store is to organize the chaos of shoppers into groups and to organize the chaos of products into groups, and then to introduce the appropriate groups of people to the appropriate groups of products. So, in reality, we're interested in grouping the shoppers by their *behavior* in the store rather than by their attitudes, opinions, or even need states.

Generally, such characteristics as age, sex, and others inherent to the individual shopper are subsumed. *Attitude*, of course, is less fixed, but has been given a great deal of consideration in many segmentation schemes. This certainly includes such things as need states and other transitory mental conditions. Although individual characteristics and attitude criteria are of great value in planning outside-the-store communication strategies (advertising), they are more difficult for store management to actually respond to effectively.

Behavior is the critical in-store factor. It is widely recognized that it is more reliable to observe what people do than to ask them what they do. In other words, if behavioral data is available, it will generally be more reliable and relevant than the shoppers' attitudes and memories. After all, in the end, the only thing that matters is whether the shopper buys—a strictly behavioral matter. Alexander "Sandy" Swan of Dr. Pepper/Seven Up, an early supporter of PathTracker™ studies, once told me: "I don't care whether the person buying my product is a 60-year-old man who drives up in an $80,000 BMW, or a 17-year-old pierced teen who arrives with her friends in a beat-up VW. All that matters is that they buy."

Endnotes

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4. For the more technically minded, arriving at the clusters in Table 1.1 is based on a formula that calculates the discriminants, which are complex combinations of the variables chosen. There are mathematical ways to judge which variables will help to discriminate among the members of the group. Using the variables that show the differences among the clusters most clearly suggests that those are relevant differences. Although any number of discriminants can be computed, you are really looking for the lowest number that still gives a reasonably good description of the data. Those variables that have the most impact can then be used to describe the emerging clusters. A word of warning: The results are based on the variables selected, so they will reflect the analyst's judgment in selecting variables, as well as the available data.

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