male population was mustered for the fight. The men had no uniforms, so they wore ordinary clothes: coats to ward off the early morning chill and large-brimmed hats.

As the colonists rushed toward Lexington, the British Regulars (as they were known) were marching in formation toward the town as well. By dawn, the advancing soldiers could see figures all around them in the half-light, armed men running through the surrounding fields, outpacing the British in their rush to get to Lexington. As the Regulars neared the town center, they could hear drums beating in the distance. Finally the British came upon Lexington Common and the two sides met face-to-face: several hundred British soldiers confronting less than a hundred militia. In that first exchange, the British got the best of the colonists, gunning down seven militiamen in a brief flurry of gunshots on the common. But that was only the first of what would be several battles that day. When the British moved on to Concord, to systematically search for the cache of guns and ammunition they had been told was stored there, they would clash with the militia again, and this time they would be soundly defeated. This was the beginning of the American Revolution, a war that before it was over would claim many lives and consume the entire American colony. When the American colonists declared independence the following year, it would be hailed as a victory for an entire nation. But that is not the way it began. It began on a cold spring morning, with a word-of-mouth epidemic that spread from a little stable boy to all of New England, relying along the way on a small number of very special people: a few Salesmen and a man with the particular genius of both a Maven and a Connector.

In the late 1960s, a television producer named Joan Gantz Cooney set out to start an epidemic. Her target was three-, four-, and five-year-olds. Her agent of infection was television, and the "virus" she wanted to spread was literacy. The show would last an hour and run five days a week, and the hope was that if that hour was contagious enough it could serve as an educational Tipping Point: giving children from disadvantaged homes a leg up once they began elementary school, spreading prolearning values from watchers to nonwatchers, infecting children and their parents, and lingering long enough to have an impact well after the children stopped watching the show. Cooney probably wouldn't have used these concepts or described her goals in precisely this way. But what she wanted to do, in essence, was create a learning epidemic to counter the prevailing epidemics of poverty and illiteracy. She called her idea Sesame Street.
By any measure, this was an audacious idea. Television is a great way to reach lots of people, very easily and cheaply. It entertains and dazzles. But it isn’t a particularly educational medium. Gerald Lesser, a Harvard University psychologist who joined with Cooney in founding Sesame Street, says that when he was first asked to join the project, back in the late 1960s, he was skeptical. “I had always been very much into fitting how you teach to what you know about the child,” he says. “You try to find the kid’s strengths, so you can play to them. You try to understand the kid’s weaknesses, so you can avoid them. Then you try and teach that individual kid’s profile. . . . Television has no potential, no power to do that.” Good teaching is interactive. It engages the child individually. It uses all the senses. It responds to the child. But a television is just a talking box. In experiments, children who are asked to read a passage and are then tested on it will invariably score higher than children asked to watch a video of the same subject matter. Educational experts describe television as “low involvement.” Television is like a strain of the common cold that can spread like lightning through a population, but only causes a few sniffles and is gone in a day.

But Cooney and Lesser and a third partner — Lloyd Morrisett of the Markle Foundation in New York — set out to try anyway. They enlisted some of the top creative minds of the period. They borrowed techniques from television commercials to teach children about numbers. They used the live animation of Saturday morning cartoons to teach lessons about learning the alphabet. They brought in celebrities to sing and dance and star in comedy sketches that taught children about the virtues of cooperation or about their own emotions. Sesame Street aimed higher and tried harder than any other children’s show had, and the extraordinary thing was that it worked. Virtually every time the show’s educational value has been tested — and Sesame Street has been subject to more academic scrutiny than any television show in history — it has been proved to increase the reading and learning skills of its viewers. There are few educators and child psychologists who don’t believe that the show managed to spread its infectious message well beyond the homes of those who watched the show regularly. The creators of Sesame Street accomplished something extraordinary, and the story of how they did that is a marvelous illustration of the second of the rules of the Tipping Point, the Stickiness Factor. They discovered that by making small but critical adjustments in how they presented ideas to preschoolers, they could overcome television’s weakness as a teaching tool and make what they had to say memorable. Sesame Street succeeded because it learned how to make television sticky.

The Law of the Few, which I talked about in the previous chapter, says that one critical factor in epidemics is the nature of the messenger. A pair of shoes or a warning or an infection or a new movie can become highly contagious and tip simply by being associated with a particular kind of person. But in all those examples, I took it as given that the message itself was something that could be passed on. Paul Revere started a word-of-mouth epidemic with the
phrase “The British are coming.” If he had instead gone on that midnight ride to tell people he was having a sale on the pewter mugs at his silversmith shop, even he, with all his enormous personal gifts, could not have galvanized the Massachusetts countryside.

Roger Horchow, likewise, faxed all his friends about the restaurant his daughter took him to, performing the first step in creating a word-of-mouth epidemic. But obviously, for that epidemic to take off, the restaurant itself had to remain a good restaurant. It had to be the kind of restaurant that made an impact on the people who ate there. In epidemics, the messenger matters: messengers are what make something spread. But the content of the message matters too. And the specific quality that a message needs to be successful is the quality of “stickiness.” Is the message — or the food, or the movie, or the product — memorable? Is it so memorable, in fact, that it can create change, that it can spur someone to action?

Stickiness sounds as if it should be straightforward. When most of us want to make sure what we say is remembered, we speak with emphasis. We talk loudly, and we repeat what we have to say over and over again. Marketers feel the same way. There is a maxim in the advertising business that an advertisement has to be seen at least six times before anyone will remember it. That’s a useful lesson for Coca-Cola or Nike, who have hundreds of millions of dollars to spend on marketing and can afford to saturate all forms of media with their message. But it’s not all that useful for say, a group of people trying to spark a literacy epidemic with a small budget and one hour of programming on public television. Are there smaller, subtler, easier ways to make something stick?

Consider the field of direct marketing. A company buys an ad in a magazine or sends out a direct mailing with a coupon attached that they want the reader to clip and mail back to them with a check for their product. Reaching the consumer with the message is not the hard part of direct marketing. What is difficult is getting consumers to stop, read the advertisement, remember it, and then act on it. To figure out which ads work the best, direct marketers do extensive testing. They might create a dozen different versions of the same ad and run them simultaneously in a dozen different cities and compare the response rates to each. Conventional advertisers have preconceived ideas about what makes an advertisement work: humor, splashy graphics, a celebrity endorser. Direct marketers, by contrast, have few such preconceptions, because the number of coupons that are mailed back or the number of people who call in on an 800 number in response to a television commercial gives them an objective, iron-clad measure of effectiveness. In the advertising world, direct marketers are the real students of stickiness, and some of the most intriguing conclusions about how to reach consumers have come from their work.

In the 1970s, for example, the legendary direct marketer Lester Wunderman had a showdown with the Madison Avenue firm McCann Erickson over the Columbia Record Club account. Columbia was then — as it is now — one of the largest mail order clubs in the world, and Wunderman had handled the company’s advertising since it was formed
in the 1950s. Columbia decided, however, to hire McCann to come up with a series of television commercials to support the direct-marketing print ads that Wunderman was creating. These were not late-night commercials with a toll-free 800 number. They were standard television spots designed simply to raise awareness. Understandably, Wunderman was upset. He had handled the Columbia account for twenty years and didn’t like the idea of losing even a small part of the business to a competitor. Nor was he convinced that McCann’s advertising would actually do Columbia any good. To settle the issue, he proposed a test. Columbia, he said, should run a full complement of the advertising created by his firm in the local editions of TV Guide and Parade magazine in twenty-six media markets around the United States. In thirteen of those markets, McCann should be allowed to air its “awareness” television commercials. In the other thirteen, Wunderman would air his own set of television commercials. Whoever’s commercials created the greatest increase in response to the local TV Guide and Parade advertising would win the whole account. Columbia agreed, and after a month they tabulated the results. Responses in Wunderman’s markets were up 80 percent, compared to 19.5 percent for McCann. Wunderman had won in a rout.

The key to Wunderman’s success was something he called the “treasure hunt.” In every TV Guide and Parade ad, he had his art director put a little gold box in the corner of the order coupon. Then his firm wrote a series of TV commercials that told the “secret of the Gold Box.” Viewers were told that if they could find the gold box in their issues of Parade and TV Guide, they could write in the name of any record on the Columbia list and get that record free. The gold box, Wunderman theorized, was a kind of trigger. It gave viewers a reason to look for the ads in TV Guide and Parade. It created a connection between the Columbia message viewers saw on television and the message they read in a magazine. The gold box, Wunderman writes, “made the reader/viewer part of an interactive advertising system. Viewers were not just an audience but had become participants. It was like playing a game… The effectiveness of the campaign was startling. In 1977, none of Columbia’s ads in its extensive magazine schedule had been profitable. In 1978, with Gold Box television support, every magazine on the schedule made a profit, an unprecedented turnaround.”

What’s interesting about this story is that by every normal expectation McCann should have won the test. The gold box idea sounds like a really cheesy idea. Columbia was so skeptical of it that it took Wunderman several years to persuade them to let him try it. McCann, meanwhile, was one of the darlings of Madison Avenue, a firm renowned for its creativity and sophistication. Furthermore, McCann spent four times as much as Wunderman on media time. They bought prime-time slots for their space. Wunderman’s ads were on in the wee hours of the morning. In the last chapter, I talked about how epidemics are, in part, a function of how many people a message reaches, and by that standard McCann was way ahead. McCann did all the big things right. But they didn’t have that little final touch, that gold box, that would make their message stick.

If you look closely at epidemic ideas or messages, as often as not the elements that make them sticky turn out to
be as small and as seemingly trivial as Wunderman’s gold box. Consider, for example, the so-called fear experiments conducted by the social psychologist Howard Levanthal in the 1960s. Levanthal wanted to see if he could persuade a group of college seniors at Yale University to get a tetanus shot. He divided them up into several groups, and gave all of them a seven-page booklet explaining the dangers of tetanus, the importance of inoculation, and the fact that the university was offering free tetanus shots at the campus health center to all interested students. The booklets came in several versions. Some of the students were given a “high fear” version, which described tetanus in dramatic terms and included color photographs of a child having a tetanus seizure and other tetanus victims with urinary catheters, tracheotomy wounds, and nasal tubes. In the “low fear” version, the language describing the risks of tetanus was toned down, and the photographs were omitted. Levanthal wanted to see what impact the different booklets had on the students’ attitudes toward tetanus and their likelihood of getting a shot.

The results were, in part, quite predictable. When they were given a questionnaire later, all the students appeared to be well educated about the dangers of tetanus. But those who were given the high-fear booklet were more convinced of the dangers of tetanus, more convinced of the importance of shots, and were more likely to say that they intended to get inoculated. All of those differences evaporated, however, when Levanthal looked at how many of the students actually went and got a shot. One month after the experiments, almost none of the subjects — a mere 3 percent — had actually gone to the health center to get inoculated. For some reason, the students had forgotten everything they had learned about tetanus, and the lessons they had been told weren’t translating into action. The experiment didn’t stick. Why not?

If we didn’t know about the Stickiness Factor, we probably would conclude that something was wrong with the way the booklet explained tetanus to the students. We might wonder whether trying to scare them was the appropriate direction to take, whether there was a social stigma surrounding tetanus that inhibited students from admitting that they were at risk, or perhaps that medical care itself was intimidating to students. In any case, that only 3 percent of students responded suggested that there was a long way to go to reach the goal. But the Stickiness Factor suggests something quite different. It suggests that the problem probably wasn’t with the overall conception of the message at all, and that maybe all the campaign needed was a little gold box. Sure enough, when Levanthal redid the experiment, one small change was sufficient to tip the vaccination rate up to 28 percent. It was simply including a map of the campus, with the university health building circled and the times that shots were available clearly listed.

There are two interesting results of this study. The first is that of the 28 percent who got inoculated, an equal number were from the high-fear and the low-fear group. Whatever extra persuasive muscle was found in the high-fear booklet was clearly irrelevant. The students knew, without seeing gory pictures, what the dangers of tetanus were, and what they ought to be doing. The second interesting thing is that, of course, as seniors they must have
already known where the health center was, and doubtless had visited it several times already. It is doubtful that any of them would ever actually have used the map. In other words, what the tetanus intervention needed in order to tip was not an avalanche of new or additional information. What it needed was a subtle but significant change in presentation. The students needed to know how to fit the tetanus stuff into their lives; the addition of the map and the times when the shots were available shifted the booklet from an abstract lesson in medical risk — a lesson no different from the countless other academic lessons they had received over their academic career — to a practical and personal piece of medical advice. And once the advice became practical and personal, it became memorable.

There are enormous implications in Levanthal’s fear experiments and Wunderman’s work for Columbia Records for the question of how to start and tip social epidemics. We have become, in our society, overwhelmed by people clamoring for our attention. In just the past decade, the time devoted to advertisements in a typical hour of network television has grown from six minutes to nine minutes, and it continues to climb every year. The New York–based firm Media Dynamics estimates that the average American is now exposed to 2,544 different commercial messages in a day, up nearly 25 percent since the mid-1970s. There are now millions of web sites on the Internet, cable systems routinely carry over 50 channels of programming, and a glance inside the magazine section of any bookstore will tell you that there are thousands of magazines coming out each week and month, chock-full of advertising and information. In the advertising business,

this surfeit of information is called the “clutter” problem, and clutter has made it harder and harder to get any one message to stick. Coca-Cola paid $33 million for the rights to sponsor the 1992 Olympics, but despite a huge advertising push, only about 12 percent of TV viewers realized that they were the official Olympic soft drink, and another 5 percent thought that Pepsi was the real sponsor. According to a study done by one advertising research firm, whenever there are at least four different 15-second commercials in a two-and-a-half-minute commercial time-out, the effectiveness of any one 15-second ad sinks to almost zero. Much of what we are told or read or watch, we simply don’t remember. The information age has created a stickiness problem. But Levanthal and Wunderman’s examples suggest that there may be simple ways to enhance stickiness and systematically engineer stickiness into a message. This is a fact of obvious importance to marketers, teachers, and managers. Perhaps no one has done more to illustrate the potential of this kind of stickiness engineering, however, than children’s educational television, in particular the creators of Sesame Street and, later, the show it inspired, Blue’s Clues.

2.

Sesame Street is best known for the creative geniuses it attracted, people like Jim Henson and Joe Raposo and Frank Oz, who intuitively grasped what it takes to get through to children. They were television’s answer to Beatrix Potter or L. Frank Baum or Dr. Seuss. But it is a mistake to think of Sesame Street as a project conceived in
a flash of insight. What made the show unusual, in fact, was the extent to which it was exactly the opposite of that—the extent to which the final product was deliberately and painstakingly engineered. *Sesame Street* was built about a single, breakthrough insight: that if you can hold the attention of children, you can educate them.

This may seem obvious, but it isn’t. Many critics of television, to this day, argue that what’s dangerous about TV is that it is addictive, that children and even adults watch it like zombies. According to this view, it is the formal features of television—violence, bright lights, loud and funny noises, quick editing cuts, zooming in and out, exaggerated action, and all the other things we associate with commercial TV—that hold our attention. In other words, we don’t have to understand what we are looking at, or absorb what we are seeing, in order to keep watching. That’s what many people mean when they say that television is passive. We watch when we are stimulated by all the whizzes and bangs of the medium. And we look away, or turn the channel, when we are bored.

What the pioneering television researchers of the 1960s and 1970s—in particular, Daniel Anderson at the University of Massachusetts—began to realize, however, is that this isn’t how preschoolers watch TV at all. “The idea was that kids would sit, stare at the screen, and zone out,” said Elizabeth Lorch, a psychologist at Amherst College. “But once we began to look carefully at what children were doing, we found out that short looks were actually more common. There was much more variation. Children didn’t just sit and stare. They could divide their attention between a couple of different activities. And they weren’t being random. There were predictable influences on what made them look back at the screen, and these were not trivial things, not just flash and dash.” Lorch, for instance, once reedited an episode of *Sesame Street* so that certain key scenes of some of the sketches were out of order. If kids were only interested in flash and dash, that shouldn’t have made a difference. The show, after all, still had songs and Muppets and bright colors and action and all the things that make *Sesame Street* so wonderful. But it did make a difference. The kids stopped watching. If they couldn’t make sense of what they were looking at, they weren’t going to look at it.

In another experiment, Lorch and Dan Anderson showed two groups of five-year-olds an episode of *Sesame Street*. The kids in the second group, however, were put in a room with lots of very attractive toys on the floor. As you would expect, the kids in the room without the toys watched the show about 87 percent of the time, while the kids with the toys watched only about 47 percent of the show. Kids are distracted by toys. But when they tested the two groups to see how much of the show the children remembered and understood, the scores were exactly the same. This result stunned the two researchers. Kids, they realized, were a great deal more sophisticated in the way they watched than had been imagined. “We were led to the conclusion,” they wrote, “that the five-year-olds in the toys group were attending quite strategically, distributing their attention between toy play and viewing so that they looked at what for them were the most informative parts of the program. This strategy was so effective that the children could gain no more from increased attention.”
If you take these two studies together — the toys study and the editing study — you reach quite a radical conclusion about children and television. Kids don’t watch when they are stimulated and look away when they are bored. They watch when they understand and look away when they are confused. If you are in the business of educational television, this is a critical difference. It means if you want to know whether — and what — kids are learning from a TV show, all you have to do is to notice what they are watching. And if you want to know what kids aren’t learning, all you have to do is notice what they aren’t watching. Preschoolers are so sophisticated in their viewing behavior that you can determine the stickiness of children’s programming by simple observation.

The head of research for Sesame Street in the early years was a psychologist from Oregon, Ed Palmer, whose specialty was the use of television as a teaching tool. When the Children’s Television Workshop was founded in the late 1960s, Palmer was a natural recruit. “I was the only academic they could find doing research on children’s TV,” he says, with a laugh. Palmer was given the task of finding out whether the elaborate educational curriculum that had been devised for Sesame Street by its academic advisers was actually reaching the show’s viewers. It was a critical task. There are those involved with Sesame Street who say, in fact, that without Ed Palmer the show would never have lasted through the first season.

Palmer’s innovation was something he called the Distracter. He would play an episode of Sesame Street on a television monitor, and then run a slide show on a screen next to it, showing a new slide every seven and a half seconds.

“We had the most varied set of slides we could imagine,” said Palmer. “We would have a body riding down the street with his arms out, a picture of a tall building, a leaf floating through ripples of water, a rainbow, a picture taken through a microscope, an Escher drawing. Anything to be novel, that was the idea.” Preschoolers would then be brought into the room, two at a time, and told to watch the television show. Palmer and his assistants would sit slightly to the side, with a pencil and paper, quietly noting when the children were watching Sesame Street and when they lost interest and looked, instead, at the slide show. Every time the slide changed, Palmer and his assistants would make a new notation, so that by the end of the show they had an almost second-by-second account of what parts of the episode being tested managed to hold the viewers’ attention and what parts did not. The Distracter was a stickiness machine.

“We’d take that big-sized chart paper, two by three feet, and tape several of those sheets together,” Palmer says. “We had data points, remember, for every seven and a half seconds, which comes to close to four hundred data points for a single program, and we’d connect all those points with a red line so it would look like a stock market report from Wall Street. It might plummet or gradually decline, and we’d say whoa, what’s going on here. At other times it might hug the very top of the chart and we’d say, wow, that segment’s really grabbing the attention of the kids. We tabulated those Distracter scores in percentages. We’d have up to 100 percent sometimes. The average attention for most shows was around 85 to 90 percent. If the producers got that, they were happy. If they got around fifty, they’d go back to the drawing board.”
Palmer tested other children's shows, like the *Tom and Jerry* cartoons, or *Captain Kangaroo*, and compared what sections of those shows worked with what sections of *Sesame Street* worked. Whatever Palmer learned, he fed back to the show's producers and writers, so they could fine-tune the material accordingly. One of the standard myths about children's television, for example, had always been that kids love to watch animals. "The producers would bring in a cat or an ant eater or an otter and show it and let it cavort around," Palmer says. "They thought that would be interesting. But our Distracter showed that it was a bomb every time." A huge effort went into a *Sesame Street* character called the Man from Alphabet, whose specialty was puns. Palmer showed that kids hated him. He was canned. The Distracter showed that no single segment of the *Sesame Street* format should go beyond four minutes, and that three minutes was probably optimal. He forced the producers to simplify dialogue and abandon certain techniques they had taken from adult television. "We found to our surprise that our preschool audience didn't like it when the adult cast got into a contentious discussion," he remembers. "They didn't like it when two or three people would be talking at once. That's the producers' natural instinct, to hype a scene by creating confusion. It's supposed to tell you that this is exciting. The fact is that our kids turned away from that kind of situation. Instead of picking up on the signal that something exciting is going on, they picked up on the signal that something confusing is going on. And they'd lose interest.

"After the third or fourth season, I'd say it was rare that we ever had a segment below eighty-five percent. We would almost never see something in the fifty to sixty percent range, and if we did, we'd fix it. You know Darwin's terms about the survival of the fittest? We had a mechanism to identify the fittest and decide what should survive."

The most important thing that Palmer ever found out with the Distracter, though, came at the very beginning, before *Sesame Street* was even on the air. "It was the summer of 1969 and we were a month and a half from air date," Lesser remembers. "We decided, let's go for broke. Let's produce five full shows — one hour each — before we go to air and we'll see what we've got." To test the shows, Palmer took them to Philadelphia and over the third week of July showed them to groups of preschoolers in sixty different homes throughout the city. It was a difficult period. Philadelphia was in the midst of a heat wave, which made the children who were supposed to watch the show restless and inattentive. In the same week, as well, Apollo 11 landed on the moon, and some children — understandably — seemed to prefer that historic moment to *Sesame Street*. Worst of all were the conclusions from Palmer's Distracter. "What we found," Lesser says, "almost destroyed us."

The problem was that when the show was originally conceived, the decision was made that all fantasy elements of the show be separated from the real elements. This was done at the insistence of many child psychologists, who felt that to mix fantasy and reality would be misleading to children. The Muppets, then, were only seen with other Muppets, and the scenes filmed on Sesame Street itself involved only real adults and children. What Palmer found out in Philadelphia, though, was that as soon as they
switched to the street scenes, the kids lost all interest. “The street was supposed to be the glue,” Lesser said. “We would always come back to the street. It pulled the show together. But it was just adults doing things and talking about stuff and the kids weren’t interested. We were getting incredibly low attention levels. The kids were leaving the show. Levels would pop back up if the Muppets came back, but we couldn’t afford to keep losing them like that.” Lesser calls Palmer’s results a “turning point in the history of Sesame Street. We knew that if we kept the street that way, the show was going to die. Everything was happening so fast. We had the testing in the summer, and we were going on the air in the fall. We had to figure out what to do.”

Lesser decided to defy the opinion of his scientific advisers. “We decided to write a letter to all the other developmental psychologists and say, we know how you guys think about mixing fantasy and reality. But we’re going to do it anyway. If we don’t, we’ll be dead in the water.” So the producers went back and reshoot all of the street scenes. Henson and his coworkers created puppets who could walk and talk with the adults of the show and could live alongside them on the street. “That’s when Big Bird and Oscar the Grouch and Snuffleupagus were born,” said Palmer. What we now think of as the essence of Sesame Street — the artful blend of fluffy monsters and earnest adults — grew out of a desperate desire to be sticky.

The Distracter, however, for all its strengths, is a fairly crude instrument. It tells you that a child understands what is happening on the screen and as a result is paying attention. But it doesn’t tell you what the child understands or, more precisely, it doesn’t tell you whether the child is paying attention to what he or she ought to be paying attention to.

Consider the following two Sesame Street segments, both of which are called visual-blending exercises — segments that teach children that reading consists of blending together distinct sounds. In one, “Hug,” a female Muppet, approaches the word HUG in the center of the screen. She stands behind the H, sounding it out carefully, then moves to the U, and then the G. She does it again, moving from left to right, pronouncing each letter separately, before putting the sounds together to say “hug.” As she does, the Muppet Herry Monster enters and repeats the word as well. The segment ends with the Herry Monster hugging the delighted little-girl Muppet.

In another segment, called “Oscar’s Blending,” Oscar the Grouch and the Muppet Crummy play a game called “Breakable Words,” in which words are assembled and then taken apart. Oscar starts by calling for C, which pops up on the lower left corner of the screen. The letter C, Oscar tells Crummy, is pronounced “cuh.” Then the letters at pop up in the lower right-hand corner and Crummy sounds the letters out — “at.” The two go back and forth — Oscar saying “cuh” and Crummy “at” — each time faster and faster, until the sounds blend together to make cat. As this happens, the letters at the bottom of the screen move together as well to make “cat.” The two Muppets repeat “cat” a few times and then the word drops from sight, accompanied by a crashing sound. Then the process begins again with the word bat.
Both of these segments are entertaining. They hold children’s attention. On the Distracter, they score brilliantly. But do they actually teach the fundamentals of reading? That’s a much harder question. To answer it, the producers of Sesame Street in the mid-1970s called in a group of researchers at Harvard University led by a psychologist named Barbara Flagg who were expert in something called eye movement photography. Eye movement research is based on the idea that the human eye is capable of focusing on only a very small area at one time — what is called a perceptual span. When we read, we are capable of taking in only about one key word and then four characters to the left and fifteen characters to the right at any one time. We jump from one of these chunks to another, pausing — or fixating — on them long enough to make sense of each letter. The reason we can focus clearly on only that much text is that most of the sensors in our eyes — the receptors that process what we see — are clustered in a small region in the very middle of the retina called the fovea. That’s why we move our eyes when we read: we can’t pick up much information about the shape, or the color, or the structure of words unless we focus our fovea directly on them. Just try, for example, to reread this paragraph by staring straight ahead at the center of the page. It’s impossible.

If you can track where someone’s fovea is moving and what they are fixating on, in other words, you can tell with extraordinary precision what they are actually looking at and what kind of information they are actually receiving. The people who make television commercials, not surprisingly, are obsessed with eye tracking. If you make a beer commercial with a beautiful model, it would be really important to know whether the average twenty-two-year-old male in your target audience fixates only on the model or eventually moves to your can of beer. Sesame Street went to Harvard in 1975 for the same reason. When kids watched “Oscar’s Blending” or “Hug,” were they watching and learning about the words, or were they simply watching the Muppets?

The experiment was conducted with twenty-one four- and five-year-olds, who were brought to the Harvard School of Education over the course of a week by their parents. One by one they were seated in an antique barber’s chair with a padded headrest about three feet away from a 17-inch color television monitor. A Gulf & Western infrared Eye-View Monitor was set up just off to the left, carefully calibrated to track the fovea movements of each subject. What they found was that “Hug” was a resounding success. Seventy-six percent of all fixations were on the letters. Better still, 83 percent of all preschoolers fixated on the letters in a left-to-right sequence — mimicking, in other words, the actual reading process. “Oscar’s Blending,” on the other hand, was a disaster. Only 35 percent of total fixations fell on the letters. And exactly zero percent of the preschoolers read the letters from left to right. What was the problem? First, the letter shouldn’t have been on the bottom of the screen because, as almost all eye movement research demonstrates, when it comes to television people tend to fixate on the center of the screen. That issue, though, is really secondary to the simple fact that the kids weren’t watching the letters because they were watching Oscar. They were watching the model and
not the beer can. "I remember 'Oscar's Blending,'" Flagg says. "Oscar was very active. He was really making a fuss in the background, and the word is not close to him at all. He's moving his mouth a lot, moving his hands. He has things in his hands. There is a great deal of distraction. The kids don't focus on the letters at all because Oscar is so interesting." Oscar was sticky. The lesson wasn't.

3.

This was the legacy of Sesame Street: If you paid careful attention to the structure and format of your material, you could dramatically enhance stickiness. But is it possible to make a show even stickier than Sesame Street? This was what three young television producers at the Nickelodeon Network in Manhattan asked themselves in the mid-1990s. It was a reasonable question. Sesame Street, after all, was a product of the 1960s, and in the intervening three decades major strides had been made in understanding how children's minds work. One of the Nickelodeon producers, Todd Kessler, had actually worked on Sesame Street and left the show dissatisfied. He didn't like the fast-paced "magazine" format of the show. "I love Sesame Street," he says. "But I always believed that kids didn't have short attention spans, that they could easily sit still for a half an hour." He found traditional children's television too static. "Because the audience is not all that verbal or even preverbal, it is important to tell the story visually," he went on. "It's a visual medium, and to make it sink in, to make it powerful, you've got to make use of that. There is so much children's television that is all talk. The audience has a hard time keeping up with that." Kessler's colleague, Tracy Santomero, grew up on Sesame Street and had similar misgivings. "We wanted to learn from Sesame Street and take it one step further," Santomero said. "TV is a great medium for education. But people up until now haven't explored the potential of it. They've been using it in a rote way. I believed we could turn that around."

What they came up with is a show called Blue's Clues. It is half an hour, not an hour. It doesn't have an ensemble cast. It has just one live actor, Steve, a fresh-faced man in his early twenties in khakis and a rugby shirt who acts as the show's host. Instead of a varied, magazine format, each episode follows a single story line—the exploits of an animated dog by the name of Blue. It has a flat, two-dimensional feel, more like a video version of a picture book than a television show. The pace is deliberate. The script is punctuated with excruciatingly long pauses. There is none of the humor or wordplay or cleverness that characterizes Sesame Street. One of the animated characters on the show, a mailbox, is called Mailbox. Two other regular characters, a shovel and a pail, are called Shovel and Pail. And Blue, of course, the show's star, is Blue because he's the color blue. It is difficult, as an adult, to watch Blue's Clues and not wonder how this show could ever represent an improvement over Sesame Street. And yet it does. Within months of its debut in 1996, Blue's Clues was trouncing Sesame Street in the ratings. On the Distracter test, it scores higher than its rival in capturing children's attention. Jennings Bryant, an educational researcher at the University of Alabama, conducted a study of 120 children, comparing the performance of
regular Blue's Clues watchers to watchers of other educational shows on a series of cognitive tests.

"After six months we began to get very big differences," Bryant said. "By almost all of our measures of flexible thinking and problem solving, we had statistically significant differences. If there were sixty items on the test, you might find that the Blue's Clues watchers were correctly identifying fifty of them, and the control group was identifying thirty-five." Blue's Clues may be one of the stickiest television shows ever made.

How is it that such an unprepossessing show is even stickier than Sesame Street? The answer is that Sesame Street, as good as it is, has a number of subtle but not insignificant limitations. Consider, for example, the problem created by the show's insistence on being clever. From the beginning Sesame Street was intended to appeal to both children and adults. The idea was that one of the big obstacles facing children — particularly children from lower-income families — was that their parents didn't encourage or participate in their education. Sesame Street's creators wanted a show that mothers would watch along with their children. That's why the show is loaded with so many "adult" elements, the constant punning and pop culture references like Monsterpiece Theater or the Samuel Beckett parody "Waiting for Elmo." (The show's head writer, Lou Berger, says that the reason he applied for a job at Sesame Street was because of a Kermit sketch he saw while watching the show with his son in 1979. "It was one of those crazy fairy tales. They were looking for a princess in distress. Kermit ran out to this female Muppet princess and said" — and here Berger did a pitch-perfect Kermit —

"Excuse me, are you a female princess in distress? And she said, 'What does this look like? A pant suit?' I remember thinking, 'That's so great. I have to work there.' ")

The problem is, preschoolers don't get these kinds of jokes, and the presence of the humor — like the elaborate pun on "distress" — can serve as a distraction. There is a good example of this in an episode of Sesame Street called "Roy" that ran on Christmas Eve in 1997. The episode opens with Big Bird running into a mail carrier, who has never been on Sesame Street before. The mail carrier hands Big Bird a package, and Big Bird is immediately puzzled: "If this is the first time you have ever been here," he asks, "how did you know I was Big Bird?"

MAIL CARRIER: Well, you have to admit, it's easy to figure out! [Gestures broadly at Big Bird]

BB: It is? [Looks at himself]. Oh, I see. The package is for Big Bird, and I'm a big bird. I forget sometimes. I'm just what my name says. Big Bird is a big bird.

Big Bird becomes sad. He realizes that everyone else has a name — like Oscar, or Snuffy — but he has only a description. He asks the mail carrier what her name is. She says Imogene.

BB: Gee, that's a nice name. [Looking to the camera, wistfully] I wish I had a real name like that, instead of one that just says what I am, as if I were an apple or a chair or something.

Thereupon begins a search by Big Bird for a new name. With the help of Snuffy, he canvases Sesame Street
for suggestions — Zackedackle, Butch, Bill, Omar, Larry, Sammy, Ebenezer, Jim, Napoleon, Lancelot, Rocky — before settling on Roy. But then, once everyone starts calling him by his new name, Big Bird realizes that he doesn’t like it after all. “Somehow it doesn’t seem right,” he says. “I think I made a big mistake.” He switches back. “Even if Big Bird isn’t a regular name,” he concludes, “it’s my name, and I like the way all my friends say it.”

This was, at least on the surface, an excellent episode. The premise is challenging and conceptual, but fascinating. It deals candidly with emotion, and, unlike other children’s shows, tells children that it’s okay not to be happy all of the time. Most of all, it’s funny.

It sounds like it should be a winner, right?

Wrong. The Roy show was tested by the Sesame Street research staff and the numbers were very disappointing. The first segment involving Snuffy and Big Bird did well. As you would expect, the viewers were curious. Then things began to fall apart. By the second of the street scenes, attention dropped to 80 percent. By the third, 78 percent. By the fourth 40 percent, then 50, then 20. After viewing the show, the kids were quizzed on what they had seen. “We asked very specific questions and were looking for clear answers,” Rosemary Truglio, Sesame Street’s research head said. “What was the show about? Sixty percent knew. What did Big Bird want to do? Fifty-three percent knew. What was Big Bird’s new name? Twenty percent knew. How did Big Bird feel at the end? Fifty percent knew.” By comparison, another of the shows tested by Sesame Street at the very same time recorded 90 percent plus correct answers on the postshow quiz. The show simply wasn’t making any impression. It wasn’t sticking.

Why did the show fail? The problem, at root, is with the premise of the show — the essential joke that Big Bird doesn’t want to be known as a big bird. That’s the kind of wordplay that a preschooler simply doesn’t understand. Preschoolers make a number of assumptions about words and their meaning as they acquire language, one of the most important of which is what the psychologist Ellen Markman calls the principle of mutual exclusivity. Simply put, this means that small children have difficulty believing that any one object can have two different names. The natural assumption of children, Markman argues, is that if an object or person is given a second label, then that label must refer to some secondary property or attribute of that object. You can see how useful this assumption is to a child faced with the extraordinary task of assigning a word to everything in the world. A child who learns the word elephant knows, with absolute certainty, that it is something different from a dog. Each new word makes the child’s knowledge of the world more precise. Without mutual exclusivity, by contrast, if a child thought that elephant could simply be another label for dog, then each new word would make the world seem more complicated. Mutual exclusivity also helps the child think clearly. “Suppose,” Markman writes, “a child who already knows ‘apple’ and ‘red’ hears someone refer to an apple as ‘round.’ By mutual exclusivity, the child can eliminate the object (apple) and its color (red) as the meaning of ‘round’ and can try to analyze the object for some other property to label.”
What this means, though, is that children are going to have trouble with objects that have two names, or objects that change names. A child has difficulty with, say, the idea that an oak is both an oak and a tree; he or she may well assume that in that case “tree” is a word for collection of oaks.

The idea, then, that Big Bird no longer wants to be called Big Bird but instead wants to be called Roy is almost guaranteed to befuddle a preschooler. How can someone with one name decide to have another name? Big Bird is saying that Big Bird is merely a descriptive name of the type of animal he is, and that he wants a particular name. He doesn’t want to be a tree. He wants to be an oak. But three- and four-year-olds don’t understand that a tree can also be an oak. To the extent that they understand what is going on at all, they probably think that Big Bird is trying to change into something else — into some other kind of animal, or some other collection of animals. And how could he do that?

There’s a deeper problem. *Sesame Street* is a magazine show. A typical show consists of at least forty distinct segments, none more than about three minutes — street scenes with the actors and Muppets, animation, and short films from outside the studio. With shows like “Roy,” in the late 1990s, the writers of the show attempted, for the first time, to link some of these pieces together with a common theme. For most of the show’s history, though, the segments were entirely autonomous; in fact new *Sesame* shows were constructed, for the most part, by mixing together fresh street scenes with animated bits and filmed sequences from the show’s archives.

The show’s creators had a reason for wanting to construct *Sesame Street* this way. They thought preschoolers did not have the attention span to handle anything other than very short, tightly focused segments. “We looked at the viewing patterns of young children, and we found that they were watching Laugh-In,” says Lloyd Morrisett, who was one of the show’s founders. “That had a very strong effect on the early *Sesame Street*. Zany, relatively quick one-liners. The kids seemed to love it.” *Sesame Street*’s creators were impressed even more by the power of television commercials. The sixties were the golden age of Madison Avenue, and at the time it seemed to make perfect sense that if a 60-second television spot could sell breakfast cereal to a four-year-old, then it could also sell that child the alphabet. Part of the appeal of Jim Henson and the Muppets to the show’s creators, in fact, was that in the 1960s Henson had been running a highly successful advertising shop. Many of the most famous Muppets were created for ad campaigns: Big Bird is really a variation of a seven-foot dragon created by Henson for La Choy commercials; Cookie Monster was a pitchman for Frito-Lay; Grover was used in promotional films for IBM. (Henson’s Muppet commercials from the 50s and 60s are hysterically funny but have a dark and edgy quality that understandably was absent from his *Sesame Street* work.)

“I think the most significant format feature in a commercial is that it’s about one thing,” said Sam Gibbon, one of the earliest *Sesame Street* producers. “It’s about selling one idea. The notion of breaking down the production of *Sesame Street* into units small enough so they could
address a single educational goal like an individual letter owed a lot to that technique of commercials."

But is the commercial theory of learning true? Daniel Anderson says that new research suggests that children actually don’t like commercials as much as we thought they did because commercials “don’t tell stories, and stories have a particular salience and importance to young people.” The original Sesame Street was anti-narrative: it was, by design, an unconnected collection of sketches. “It wasn’t just the ads that influenced the early Sesame Street,” Anderson says. “There was also a theoretical perspective at the time, based in part on [the influential child psychologist] Piaget, that a preschool child couldn’t follow an extended narrative.” Since the late 1960s, however, this idea has been turned on its head. At three and four and five, children may not be able to follow complicated plots and subplots. But the narrative form, psychologists now believe, is absolutely central to them. “It’s the only way they have of organizing the world, of organizing experience,” Jerome Bruner, a psychologist at New York University, says. “They are not able to bring theories that organize things in terms of cause and effect and relationships, so they turn things into stories, and when they try to make sense of their life they use the storied version of their experience as the basis for further reflection. If they don’t catch something in a narrative structure, it doesn’t get remembered very well, and it doesn’t seem to be accessible for further kinds of mulling over.”

Bruner was involved, in the early 1980s, in a fascinating project — called “Narratives from the Crib” — that was critical in changing the views of many child experts.

The project centered on a two-year-old girl from New Haven called Emily, whose parents — both university professors — began to notice that before their daughter went to sleep at night she talked to herself. Curious, they put a small microcassette recorder in her crib and, several nights a week, for the next fifteen months, recorded both the conversations they had with Emily as they put her to bed and the conversations she had with herself before she fell asleep. The transcripts — 122 in all — were then analyzed by a group of linguists and psychologists led by Katherine Nelson of Harvard University. What they found was that Emily’s conversations with herself were more advanced than her conversations with her parents. In fact, they were significantly more advanced. One member of the team that met to discuss the Emily tapes, Carol Fleisher Feldman, later wrote:

In general, her speech to herself is so much richer and more complex [than her speech to adults] that it has made all of us, as students of language development, begin to wonder whether the picture of language acquisition offered in the literature to date does not underestimate the actual patterns of the linguistic knowledge of the young child. For once the lights are out and her parents leave the room, Emily reveals a stunning mastery of language forms we would never have suspected from her [everyday] speech.

Feldman was referring to things like vocabulary and grammar and — most important — the structure of Emily’s monologues. She was making up stories, narratives, that explained and organized the things that happened to
Sometimes these stories were what linguists call temporal narratives. She would create a story to try to integrate events, actions, and feelings into one structure—a process that is a critical part of a child's mental development. Here is a story Emily told herself at 32 months, which I will quote at length to emphasize just how sophisticated children's speech is when they are by themselves:

Tomorrow when we wake up from bed, first me and Daddy and Mommy, you, eat breakfast eat breakfast like we usually do, and then we're going to play and then soon as Daddy comes, Carl's going to come over, and then we're going to play a little while. And then Carl and Emily are both going down the car with somebody, and we're going to ride to nursery school [whispered], and then when we get there, we're all going to get out of the car, go into nursery school, and Daddy's going to give us kisses, then go, and then say, and then we will say goodbye, then he's going to work and we're going to play at nursery school. Won't that be funny? Because sometimes I go to nursery school cause it's a nursery school day. Sometimes I stay with Tanta all week. And sometimes we play mom and dad. But usually, sometimes, I, um, oh go to nursery school. But today I'm going to nursery school in the morning. In the morning, Daddy in the, when and usual, we're going to eat breakfast like we usually do, and then we're going to . . . and then we're going to . . . play. And then we're, then the doorbell's going to ring, and here comes Carl in here, and then Carl, and then we are all going to play, and then . . .

Emily is describing her Friday routine. But it's not a particular Friday. It's what she considers an ideal Friday, a hypothetical Friday in which everything she wants to happen happens. It is, as Bruner and Joan Lucariello write in their commentary on the segment,

a remarkable act of world making . . . she uses tonal emphasis, prolongation of key words, and a kind of "reenactment" reminiscent of the we-are-there cinema verité (with her friend Carl practically narrated through the door as he enters). As if to emphasize that she has everything "down pat" she delivers the monologue in a rhythmic, almost singsong way. And in the course of the soliloquy, she even feels free to comment on the drollness of the course that events are taking ("Won't that be funny").

It is hard to look at this evidence of the importance of narrative and not marvel at the success of Sesame Street. Here was a show that eschewed what turns out to be the most important of all ways of reaching young children. It also diluted its appeal to preschoolers with jokes aimed only at adults. Yet it succeeded anyway. That was the genius of Sesame Street, that through the brilliance of its writing and the warmth and charisma of the Muppets it managed to overcome what might otherwise have been overwhelming obstacles. But it becomes easy to understand how you would make a children's show even stickier than Sesame Street. You'd make it perfectly literal, without any wordplay or comedy that would confuse preschoolers. And you'd teach kids how to think in the same way that kids teach themselves how to think—in the form of the story. You would make, in other words, Blue's Clues.
Every episode of Blue's Clues is constructed the same way. Steve, the host, presents the audience with a puzzle involving Blue, the animated dog. In one show the challenge is to figure out Blue's favorite story. In another, it is to figure out Blue's favorite food. To help the audience unlock the puzzle, Blue leaves behind a series of clues, which are objects tattooed with one of his paw prints. In between the discovery of the clues, Steve plays a series of games — mini-puzzles — with the audience that are thematically related to the overall puzzle. In the show about Blue's favorite story, for example, one of the mini-puzzles involves Steve and Blue sitting down with the Three Bears, whose bowls of porridge have been mixed up, and enlisting the audience's help in matching the small, middle, and large bowls with Mama, Papa, and Baby Bear. As the show unfolds, Steve and Blue move from one animated set to another, from a living room to a garden to fantastical places, jumping through magical doorways, leading viewers on a journey of discovery, until, at the end of the story, Steve returns to the living room. There, at the climax of every show, he sits down in a comfortable chair to think — a chair known, of course, in the literal world of Blue's Clues, as the Thinking Chair. He puzzles over Blue's three clues and attempts to come up with the answer.

This much is, obviously, a radical departure from Sesame Street. But having turned their back on that part of the Sesame Street legacy, the creators of Blue's Clues then went back and borrowed those parts of Sesame Street that they thought did work. In fact, they did more than borrow. They took those sticky elements and tried to make them even stickier. The first was the idea that the more kids are engaged in watching something — intellectually and physically — the more memorable and meaningful it becomes. "I'd noticed that some segments on Sesame Street elicited a lot of interaction from kids, where the segments asked for it," says Daniel Anderson, who worked with Nickelodeon in designing Blue's Clues. "Something that stuck in my mind was when Kermit would hold his finger to the screen and draw an animated letter, you'd see kids holding their fingers up and drawing a letter along with him. Or occasionally, when a Sesame Street character would ask a question, you'd hear kids answer out loud. But Sesame Street just somehow never took that idea and ran with it. They knew that kids did this some of the time, but they never tried to build a show around that idea. Nickelodeon did some pilot shows before Blue's Clues where kids would be explicitly asked to participate, and lo and behold, there was a lot of evidence that they would. So putting these ideas together, that kids are interested in being intellectually active when they watch TV, and given the opportunity they'll be behaviorally active, that created the philosophy for Blue's Clues."

Steve, as a result, spends almost all his time on screen talking directly at the camera. When he enlists the audience's help, he actually enlists the audience's help. Often, there are close-ups of his face, so it is as if he is almost in the room with his audience. Whenever he asks a question, he pauses. But it's not a normal pause. It's a preschooler's pause, several beats longer than any adult would ever wait for an answer. Eventually an unseen studio audience yells
out a response. But the child at home is given the opportunity to shout out an answer of his own. Sometimes Steve will play dumb. He won’t be able to find a certain clue that might be obvious to the audience at home and he’ll look beseechingly at the camera. The idea is the same: to get the children watching to verbally participate, to become actively involved. If you watch *Blue’s Clues* with a group of children, the success of this strategy is obvious. It’s as if they’re a group of diehard Yankees fans at a baseball game.

The second thing that *Blue’s Clues* took from *Sesame Street* was the idea of repetition. This was something that had fascinated the CTW pioneers. In the five pilot shows that Palmer and Lesser took to Philadelphia in 1969, there was a one-minute bit called Wanda the Witch that used the *w* sound over and over: Wanda the Witch wore a wig in the windy winter in Washington, etc., etc. “We didn’t know how much we could repeat elements,” Lesser says. “We put it in three times on the Monday, three times on the Tuesday, three times on the Wednesday, left it out on Thursday, then put it in right at the end of the Friday show. Some of the kids toward the end of the day Wednesday were saying, not Wanda the Witch again. When Wanda the Witch came back Friday, they jumped and clapped. Kids reach a saturation point. But then nostalgia sets in.”

Not long afterward (and quite by accident), the *Sesame Street* writers figured out why kids like repetition so much. The segment in question this time featured the actor James Earl Jones reciting the alphabet. As originally taped, Jones took long pauses between letters, because the idea was to insert other elements between the letters. But Jones, as you can imagine, cut such a compelling figure

that the *Sesame Street* producers left the film as it was and played it over and over again for years: the letter *A* or *B*, etc., would appear on the screen, there would be a long pause, and then Jones would boom out the name and the letter would disappear. “What we noticed was that the first time through, kids would shout out the name of the letter after Jones did,” Sam Gibbon says. “After a couple of repetitions, they would respond to the appearance of the letter before he did, in the long pause. Then, with enough repetitions, they would anticipate the letter before it appeared. They were sequencing themselves through the piece; first they learned the name of the letter, then they learned to associate the name of the letter with its appearance, then they learned the sequence of letters.” An adult considers constant repetition boring, because it requires reliving the same experience over and again. But to preschoolers repetition isn’t boring, because each time they watch something they are experiencing it in a completely different way. At CTW, the idea of learning through repetition was called the James Earl Jones effect.

*Blue’s Clues* is essentially a show built around the James Earl Jones effect. Instead of running new episodes one after another, and then repeating them as reruns later in the seasons—like every other television show—Nickelodeon runs the same *Blue’s Clues* episode for five straight days, Monday through Friday, before going on to the next one. As you can imagine, this wasn’t an idea that came easily to Nickelodeon. Santomero and Anderson had to convince them. (It also helped that Nickelodeon didn’t have the money to produce a full season of *Blue’s Clues* shows.) “I had the pilot in my house, and at the time
my daughter was three and a half and she kept watching it over and over again,” Anderson says. “I kept track. She watched it fourteen times without any lagging of enthusiasm.” When the pilot was taken out into the field for testing, the same thing happened. They showed it five days in a row to a large group of preschoolers, and attention and comprehension actually increased over the course of the week — with the exception of the oldest children, the five-year-olds, whose attention fell off at the very end. Like the kids watching James Earl Jones, the children responded to the show in a different way with each repeat viewing, becoming more animated and answering more of Steve’s questions earlier and earlier. “If you think about the world of a preschooler, they are surrounded by stuff they don’t understand — things that are novel. So the driving force for a preschooler is not a search for novelty, like it is with older kids, it’s a search for understanding and predictability,” says Anderson. “For younger kids, repetition is really valuable. They demand it. When they see a show over and over again, they not only are understanding it better, which is a form of power, but just by predicting what is going to happen, I think they feel a real sense of affirmation and self-worth. And Blue’s Clues doubles that feeling, because they also feel like they are participating in something. They feel like they are helping Steve.”

Of course, kids don’t always like repetition. Whatever they are watching has to be complex enough to allow, upon repeated exposure, for deeper and deeper levels of comprehension. At the same time, it can’t be so complex that the first time around it baffles the children and turns them off. In order to strike this balance, Blue’s Clues engages in much of the same kind of research as Sesame Street — but at a far more intense level. Where Sesame Street tests a given show only once — and after it’s completed — Blue’s Clues tests shows three times before they go on the air. And while Sesame Street will typically only test a third of its episodes, Blue’s Clues tests them all.

I accompanied the Blue’s Clues research team on one of their weekly excursions to talk to preschoolers. They were led by Alice Wilder, director of research for the show, a lively dark-haired woman who had just finished her doctorate in education at Columbia University. With her were two others, both women in their early twenties — Alison Gilman and Allison Sherman. On the morning that I joined them they were testing a proposed script at a preschool in Greenwich Village.

The script being tested was about animal behavior. It was, essentially, a first draft, laid out in a picture book that roughly corresponded to the way the actual episode would unfold, scene by scene, on television. The Blue’s Clues tester played the part of Steve, and walked the kids through the script, making a careful note of all the questions they answered correctly and those that seemed to baffle them. At one point, for example, Sherman sat down with a towheaded five-year-old named Walker and a four-and-a-half-year-old named Anna in a purple-and-white checked skirt. She began reading from the script. Blue had a favorite animal. Would they help us find out what it was? The kids were watching her closely. She began going through some of the subsidiary puzzles, one by one. She showed them a picture of an anteater.

“What does an anteater eat?” she asked.
Walker said, “Ants.”
Sherman turned the page to a picture of an elephant.
She pointed at its trunk.
“What’s that?”
Walker peered in. “A trunk.”
She pointed at the tusks. “Do you know what the white things are?”
Walker looked again. “Nostrils.”
She showed them a picture of a bear, then came the first Blue’s clue, a little splotch of white and black tattooed with one of Blue’s paw prints.
“That’s black and white,” Anna said.
Sherman looked at the two of them. “What animal could Blue want to learn about?” She paused. Anna and Walker looked puzzled. Finally Walker broke the silence:
“We had better go to the next clue.”

The second round of puzzles was a little harder. There was a picture of a bird. The kids were asked what the bird was doing — the answer was singing — and then why it was doing that. They talked about beavers and worms and then came to the second Blue’s clue — an iceberg. Anna and Walker were still stumped. On they went to the third round, a long discussion of fish. Sherman showed them a picture of a little fish lying camouflaged at the bottom of the sea, eying a big fish.

“Why is the fish hiding?” Sherman asked.
WALKER: “Because of the giant fish.”
ANNA: “Because he will eat him.”
They came to the third Blue’s clue. It was a cardboard cutout of one of Blue’s paw prints. Sherman took the paw print and moved it toward Walker and Anna, wiggling it as she did.

“What’s this doing?” she asked.
Walker screwed up his face in concentration. “It’s walking like a human,” he said.
“Is it wriggling like a human?” Sherman asked.
“It’s waddling,” Anna said.
Sherman went over the clues in order: black and white, ice, waddling.

There was a pause. Suddenly Walker’s face lit up. “It’s a penguin!” He was shouting with the joy of discovery. “A penguin’s black and white. It lives on the ice and it waddles!”

Blue’s Clues succeeds as a story of discovery only if the clues are in proper order. The show has to start out easy — to give the viewers confidence — and then get progressively harder and harder, challenging the preschoolers more and more, drawing them into the narrative. The first set of puzzles about anteaters and elephants had to be easier than the set of puzzles about beavers and worms, which in turn had to be easier than the final set about fish. The layering of the show is what makes it possible for a child to watch the show four and five times: on each successive watching they master more and more, guessing correctly deeper into the program, until, by the end, they can anticipate every answer.

After the morning of testing, the Blue’s Clues team sat down and went through the results of the puzzles, one by one. Thirteen out of the 26 children guessed correctly that anteaters ate ants, which wasn’t a good response rate for
the first clue. “We like to open strong,” Wilder said. They continued on, rustling through their papers. The results of a puzzle about beavers drew a frown from Wilder. When shown a picture of a beaver dam, the kids did badly on answering the first question — what is the beaver doing? — but very well (19 out of 26) on the second question, why is he doing it? “The layers are switched,” Wilder said. She wanted the easier question first. On to the fish questions: Why was the little fish hiding from the big fish? Sherman looked up from her notes. “I had a great answer. ‘The little fish didn’t want to scare the big fish.’ That’s why he was hiding.” They all laughed.

Finally, came the most important question. Was the order of Blue’s clues correct? Wilder and Gilman had presented the clues in the order that the script had stipulated: ice, waddle, then black and white. Four of the 17 kids they talked to guessed penguin after the first clue, six more guessed it after the second clue and four after all three clues. Wilder then turned to Sherman, who had given her clues in a different order: black and white, ice, waddle.

“I had no correct answers out of nine kids after one clue,” she reported. “After ice, I was one of nine, and after waddle I was six of nine.”

“Your clincher clue was waddle? That seems to work,” Wilder responded. “But along the way were they guessing lots of different things?”

“Oh yes,” Sherman said. “After one clue, I had guesses of dogs, cows, panda bears, and tigers. After ice, I got polar bears and cougars.”

Wilder nodded. Sherman’s clue order got the kids thinking as broadly as possible early in the show, but still preserved the suspense of penguin until the end. The clue order they had — the clue order that seemed the best back when they were writing the script — gave the answer away far too soon. Sherman’s clue order had suspense. The original order did not. They had spent a morning with a group of kids and come away with just what they wanted. It was only a small change. But a small change is often all that it takes.

There is something profoundly counterintuitive in the definition of stickiness that emerges from all these examples. Wunderman stayed away from prime-time slots for his commercials and bought fringe time, which goes against every principle of advertising. He eschewed slick “creative” messages for a seemingly cheesy “Gold Box” treasure hunt. Levanthal found that the hard sell — that trying to scare students into getting tetanus shots — didn’t work, and what really worked was giving them a map they didn’t need directing them to a clinic that they already knew existed. Blue’s Clues got rid of the cleverness and originality that made Sesame Street the most beloved television program of its generation, created a plodding, literal show, and repeated each episode five times in a row.

We all want to believe that the key to making an impact on someone lies with the inherent quality of the ideas we present. But in none of these cases did anyone substantially alter the content of what they were saying. Instead, they tipped the message by tinkering, on the margin, with the presentation of their ideas, by putting the Muppet behind the H-U-G, by mixing Big Bird with the adults, by repeating episodes and skits more than
once, by having Steve pause just a second longer than normal after he asks a question, by putting a tiny gold box in the corner of the ad. The line between hostility and acceptance, in other words, between an epidemic that tips and one that does not, is sometimes a lot narrower than it seems. The creators of Sesame Street did not junk their entire show after the Philadelphia disaster. They just added Big Bird, and he made all the difference in the world. Howard Levanthal didn't redouble his efforts to terrify his students into getting a tetanus shot. He just threw in a map and a set of appointment times. The Law of the Few says that there are exceptional people out there who are capable of starting epidemics. All you have to do is find them. The lesson of stickiness is the same. There is a simple way to package information that, under the right circumstances, can make it irresistible. All you have to do is find it.

On December 22, 1984, the Saturday before Christmas, Bernhard Goetz left his apartment in Manhattan's Greenwich Village and walked to the IRT subway station at Fourteenth Street and Seventh Avenue. He was a slender man in his late thirties, with sandy-colored hair and glasses, dressed that day in jeans and a windbreaker. At the station, he boarded the number two downtown express train and sat down next to four young black men. There were about twenty people in the car, but most sat at the other end, avoiding the four teenagers, because they were, as eyewitnesses would say later, "horsing around" and "acting rowdy." Goetz seemed oblivious. "How are ya?" one of the four, Troy Canty, said to Goetz, as he walked in. Canty was lying almost prone on one of the subway benches. Canty and another of the teenagers, Barry Allen, walked up to Goetz and asked him for five dollars. A third youth, James
Ramseur, gestured toward a suspicious-looking bulge in his pocket, as if he had a gun in there.

“What do you want?” Goetz asked.

“Give me five dollars,” Canty repeated.

Goetz looked up and, as he would say later, saw that Canty’s “eyes were shiny, and he was enjoying himself... He had a big smile on his face,” and somehow that smile and those eyes set him off. Goetz reached into his pocket and pulled out a chrome-plated five-shot Smith and Wesson .38, firing at each of the four youths in turn. As the fourth member of the group, Darrell Cabey, lay screaming on the ground, Goetz walked over to him and said, “You seem all right. Here’s another,” before firing a fifth bullet into Cabey’s spinal cord and paralyzing him for life.

In the tumult, someone pulled the emergency brake. The other passengers ran into the next car, except for two women who remained riveted in panic. “Are you all right?” Goetz asked the first, politely. Yes, she said. The second woman was lying on the floor. She wanted Goetz to think she was dead. “Are you all right?” Goetz asked her, twice. She nodded yes. The conductor, now on the scene, asked Goetz if he was a police officer.

“No,” said Goetz. “I don’t know why I did it.” Pause. “They tried to rip me off.”

The conductor asked Goetz for his gun. Goetz declined. He walked through the doorway at the front of the car, unhooked the safety chain, and jumped down onto the tracks, disappearing into the dark of the tunnel.

In the days that followed, the shooting on the IRT caused a national sensation. The four youths all turned out to have criminal records. Cabey had been arrested previously for armed robbery, Canty for theft. Three of them had screwdrivers in their pockets. They seemed the embodiment of the kind of young thug feared by nearly all urban-dwellers, and the mysterious gunman who shot them down seemed like an avenging angel. The tabloids dubbed Goetz the “Subway Vigilante” and the “Death Wish Shooter.” On radio call-in shows and in the streets, he was treated as a hero, a man who had fulfilled the secret fantasy of every New Yorker who had ever been mugged or intimidated or assaulted on the subway. On New Year’s Eve, a week after the shooting, Goetz turned himself in to a police station in New Hampshire. Upon his extradition to New York City, the New York Post ran two pictures on its front page: one of Goetz, handcuffed and head bowed, being led into custody, and one of Troy Canty — black, defiant, eyes hooded, arms folded — being released from the hospital. The headline read, “Led Away in Cuffs While Wounded Mugger Walks to Freedom.” When the case came to trial, Goetz was easily acquitted on charges of assault and attempted murder. Outside Goetz’s apartment building, on the evening of the verdict, there was a raucous, impromptu street party.

The Goetz case has become a symbol of a particular, dark moment in New York City history, the moment when the city’s crime problem reached epidemic proportions. During the 1980s, New York City averaged well over 2,000 murders and 600,000 serious felonies a year. Underground, on the subways, conditions could only be
described as chaotic. Before Bernie Goetz boarded the number two train that day, he would have waited on a dimly lit platform, surrounded on all sides by dark, damp, graffiti-covered walls. Chances are his train was late, because in 1984 there was a fire somewhere on the New York system every day and a derailment every other week. Pictures of the crime scene, taken by police, show that the car Goetz sat in was filthy, its floor littered with trash and the walls and ceiling thick with graffiti, but that wasn’t unusual because in 1984 every one of the 6,000 cars in the Transit Authority fleet, with the exception of the midtown shuttle, was covered with graffiti — top to bottom, inside and out. In the winter, the cars were cold because few were adequately heated. In the summer, the cars were stiflingly hot because none were air-conditioned. Today, the number two train accelerates to over 40 miles an hour as it rumbles toward the Chambers Street express stop. But it’s doubtful Goetz’s train went that fast. In 1984, there were 500 “red tape” areas on the system — places where track damage had made it unsafe for trains to go more than 15 miles per hour. Fare-beating was so commonplace that it was costing the Transit Authority as much as $150 million in lost revenue annually. There were about 15,000 felonies on the system a year — a number that would hit 20,000 a year by the end of the decade — and harassment of riders by panhandlers and petty criminals was so pervasive that ridership of the trains had sunk to its lowest level in the history of the subway system. William Bratton, who was later to be a key figure in New York’s successful fight against violent crime, writes in his autobiography of riding the New York subways in the 1980s after living in Boston for years, and being stunned at what he saw:

After waiting in a seemingly endless line to buy a token, I tried to put a coin into a turnstile and found it had been purposely jammed. Unable to pay the fare to get into the system, we had to enter through a slam gate being held open by a scruffy-looking character with his hand out; having disabled the turnstiles, he was now demanding that riders give him their tokens. Meanwhile, one of his cohorts had his mouth on the coin slots, sucking out the jammed coins and leaving his slobber. Most people were too intimidated to take these guys on: Here, take the damned token, what do I care? Other citizens were going over, under, around, or through the stiles for free. It was like going into the transit version of Dante’s Inferno.

This was New York City in the 1980s, a city in the grip of one of the worst crime epidemics in its history. But then, suddenly and without warning, the epidemic tipped. From a high in 1990, the crime rate went into precipitous decline. Murders dropped by two-thirds. Felonies were cut in half. Other cities saw their crime drop in the same period. But in no place did the level of violence fall farther or faster. On the subways, by the end of the decade, there were 75 percent fewer felonies than there had been at the decade’s start. In 1996, when Goetz went to trial a second time, as the defendant in a civil suit brought by Darrell Cabey, the case was all but ignored by the press, and Goetz himself seemed almost an anachronism. At a time when New York had become the safest big city in the country, it seemed hard to remember precisely what it was
that Goetz had once symbolized. It was simply inconceivable that someone could pull a gun on someone else on the subway and be called a hero for it.

2.

This idea of crime as an epidemic, it must be said, is a little strange. We talk about “epidemics of violence” or crime waves, but it’s not clear that we really believe that crime follows the same rules of epidemics as, say, Hush Puppies did, or Paul Revere’s ride. Those epidemics involved relatively straightforward and simple things—a product and a message. Crime, on the other hand, isn’t a single discrete thing, but a word used to describe an almost impossibly varied and complicated set of behaviors. Criminal acts have serious consequences. They require the criminal to do something that puts himself at great personal peril. To say someone is a criminal is to say that he or she is evil or violent or dangerous or dishonest or unstable or any combination of any of those things—none of which is a psychological state that would seem to be transmitted, casually, from one person to another. Criminals do not, in other words, sound like the kind of people who could be swept up by the infectious winds of an epidemic. Yet somehow, in New York City, this is exactly what occurred. In the years between the beginning and the middle of the 1990s, New York City did not get a population transplant. Nobody went out into the streets and successfully taught every would-be delinquent the distinction between right and wrong. There were just as many psychologically damaged people, criminally inclined people, living in the city at the peak of the crime wave as in the trough. But for some reason tens of thousands of those people suddenly stopped committing crimes. In 1984, an encounter between an angry subway rider and four young black youths led to bloodshed. Today, in New York’s subways, that same encounter doesn’t lead to violence anymore. How did that happen?

The answer lies in the third of the principles of epidemic transmission, the Power of Context. The Law of the Few looked at the kinds of people who are critical in spreading information. The chapter on Sesame Street and Blue’s Clues looked at the question of Stickiness, suggesting that in order to be capable of sparking epidemics, ideas have to be memorable and move us to action. We’ve looked at the people who spread ideas, and we’ve looked at the characteristics of successful ideas. But the subject of this chapter—the Power of Context—is no less important than the first two. Epidemics are sensitive to the conditions and circumstances of the times and places in which they occur. In Baltimore, syphilis spreads far more in the summer than in the winter. Hush Puppies took off because they were being worn by kids in the cutting-edge precincts of the East Village—an environment that helped others to look at the shoes in a new light. It could even be argued that the success of Paul Revere’s ride—in some way—owed itself to the fact that it was made at night. At night, people are home in bed, which makes them an awful lot easier to reach than if they are off on errands or working in the fields. And if someone wakes us up to tell us something, we automatically assume the news is going to be urgent. One can only imagine how “Paul Revere’s afternoon ride” might have compared.
This much, I think, is relatively straightforward. But the lesson of the Power of Context is that we are more than just sensitive to changes in context. We’re exquisitely sensitive to them. And the kinds of contextual changes that are capable of tipping an epidemic are very different than we might ordinarily suspect.

3.

During the 1990s violent crime declined across the United States for a number of fairly straightforward reasons. The illegal trade in crack cocaine, which had spawned a great deal of violence among gangs and drug dealers, began to decline. The economy’s dramatic recovery meant that many people who might have been lured into crime got legitimate jobs instead, and the general aging of the population meant that there were fewer people in the age range — males between eighteen and twenty-four — that is responsible for the majority of all violence. The question of why crime declined in New York City, however, is a little more complicated. In the period when the New York epidemic tipped down, the city’s economy hadn’t improved. It was still stagnant. In fact, the city’s poorest neighborhoods had just been hit hard by the welfare cuts of the early 1990s. The waning of the crack cocaine epidemic in New York was clearly a factor, but then again, it had been in steady decline well before crime dipped. As for the aging of the population, because of heavy immigration to New York in the 1980s, the city was getting younger in the 1990s, not older. In any case, all of these trends are long-term changes that one would expect to have gradual effects. In New York the decline was anything but gradual. Something else clearly played a role in reversing New York’s crime epidemic.

The most intriguing candidate for that “something else” is called the Broken Windows theory. Broken Windows was the brainchild of the criminologists James Q. Wilson and George Kelling. Wilson and Kelling argued that crime is the inevitable result of disorder. If a window is broken and left unrepaired, people walking by will conclude that no one cares and no one is in charge. Soon, more windows will be broken, and the sense of anarchy will spread from the building to the street on which it faces, sending a signal that anything goes. In a city, relatively minor problems like graffiti, public disorder, and aggressive panhandling, they write, are all the equivalent of broken windows, invitations to more serious crimes:

Muggers and robbers, whether opportunistic or professional, believe they reduce their chances of being caught or even identified if they operate on streets where potential victims are already intimidated by prevailing conditions. If the neighborhood cannot keep a bothersome panhandler from annoying passersby, the thief may reason, it is even less likely to call the police to identify a potential mugger or to interfere if the mugging actually takes place.

This is an epidemic theory of crime. It says that crime is contagious — just as a fashion trend is contagious — that it can start with a broken window and spread to an entire community. The Tipping Point in this epidemic, though,
isn’t a particular kind of person — a Connector like Lois Weisberg or a Maven like Mark Alpert. It’s something physical like graffiti. The impetus to engage in a certain kind of behavior is not coming from a certain kind of person but from a feature of the environment.

In the mid-1980s Kelling was hired by the New York Transit Authority as a consultant, and he urged them to put the Broken Windows theory into practice. They obliged, bringing in a new subway director by the name of David Gunn to oversee a multibillion-dollar rebuilding of the subway system. Many subway advocates, at the time, told Gunn not to worry about graffiti, to focus on the larger questions of crime and subway reliability, and it seemed like reasonable advice. Worrying about graffiti at a time when the entire system was close to collapse seems as pointless as scrubbing the decks of the Titanic as it headed toward the icebergs. But Gunn insisted. “The graffiti was symbolic of the collapse of the system,” he says. “When you looked at the process of rebuilding the organization and morale, you had to win the battle against graffiti. Without winning that battle, all the management reforms and physical changes just weren’t going to happen. We were about to put out new trains that were worth about ten million bucks apiece, and unless we did something to protect them, we knew just what would happen. They would last one day and then they would be vandalized.”

Gunn drew up a new management structure and a precise set of goals and timetables aimed at cleaning the system line by line, train by train. He started with the number seven train that connects Queens to midtown Manhattan, and began experimenting with new techniques to clean off the paint. On stainless-steel cars, solvents were used. On the painted cars, the graffiti were simply painted over. Gunn made it a rule that there should be no retreat, that once a car was “reclaimed” it should never be allowed to be vandalized again. “We were religious about it,” Gunn said. At the end of the number one line in the Bronx, where the trains stop before turning around and going back to Manhattan, Gunn set up a cleaning station. If a car came in with graffiti, the graffiti had to be removed during the changeover, or the car was removed from service. “Dirty” cars, which hadn’t yet been cleansed of graffiti, were never to be mixed with “clean” cars. The idea was to send an unambiguous message to the vandals themselves.

“We had a yard up in Harlem on one hundred thirty-fifth Street where the trains would lay up over night,” Gunn said. “The kids would come the first night and paint the side of the train white. Then they would come the next night, after it was dry, and draw the outline. Then they would come the third night and color it in. It was a three-day job. We knew the kids would be working on one of the dirty trains, and what we would do is wait for them to finish their mural. Then we’d walk over with rollers and paint it over. The kids would be in tears, but we’d just be going up and down, up and down. It was a message to them. If you want to spend three nights of your time vandalizing a train, fine. But it’s never going to see the light of day.”

Gunn’s graffiti cleanup took from 1984 to 1996. At that point, the Transit Authority hired William Bratton to head the transit police, and the second stage of the reclamation of the subway system began. Bratton was, like Gunn, a disciple of Broken Windows. He describes
Kelling, in fact, as his intellectual mentor, and so his first step as police chief was as seemingly quixotic as Gunn's. With felonies — serious crimes — on the subway system at an all-time high, Bratton decided to crack down on fare-beating. Why? Because he believed that, like graffiti, fare-beating could be a signal, a small expression of disorder that invited much more serious crimes. An estimated 170,000 people a day were entering the system, by one route or another, without paying a token. Some were kids, who simply jumped over the turnstiles. Others would lean backward on the turnstiles and force their way through. And once one or two or three people began cheating the system, other people — who might never otherwise have considered evading the law — would join in, reasoning that if some people weren't going to pay, they shouldn't either, and the problem would snowball. The problem was exacerbated by the fact fare-beating was not easy to fight. Because there was only $1.25 at stake, the transit police didn't feel it was worth their time to pursue it, particularly when there were plenty of more serious crimes happening down on the platform and in the trains.

Bratton is a colorful, charismatic man, a born leader, and he quickly made his presence felt. His wife stayed behind in Boston, so he was free to work long hours, and he would roam the city on the subway at night, getting a sense of what the problems were and how best to fight them. First, he picked stations where fare-beating was the biggest problem, and put as many as ten policemen in plainclothes at the turnstiles. The team would nab fare-beaters one by one, handcuff them, and leave them standing, in a daisy chain, on the platform until they had a "full

catch." The idea was to signal, as publicly as possible, that the transit police were now serious about cracking down on fare-beaters. Previously, police officers had been wary of pursuing fare-beaters because the arrest, the trip to the station house, the filling out of necessary forms, and the waiting for those forms to be processed took an entire day — all for a crime that usually merited no more than a slap on the wrist. Bratton retrofitted a city bus and turned it into a rolling station house, with its own fax machines, phones, holding pen, and fingerprinting facilities. Soon the turnaround time on an arrest was down to an hour. Bratton also insisted that a check be run on all those arrested. Sure enough, one out of seven arrestees had an outstanding warrant for a previous crime, and one out of twenty was carrying a weapon of some sort. Suddenly it wasn't hard to convince police officers that tackling fare-beating made sense. "For the cops it was a bonanza," Bratton writes. "Every arrest was like opening a box of Cracker Jack. What kind of toy am I going to get? Got a gun? Got a knife? Got a warrant? Do we have a murderer here? ... After a while the bad guys wised up and began to leave their weapons home and pay their fares." Under Bratton, the number of ejections from subway stations — for drunkenness, or improper behavior — tripled within his first few months in office. Arrests for misdemeanors, for the kind of minor offenses that had gone unnoticed in the past, went up fivefold between 1990 and 1994. Bratton turned the transit police into an organization focused on the smallest infractions, on the details of life underground.

After the election of Rudolph Giuliani as mayor of New York in 1994, Bratton was appointed head of the
New York City Police Department, and he applied the same strategies to the city at large. He instructed his officers to crack down on quality-of-life crimes: on the “squeegee men” who came up to drivers at New York City intersections and demanded money for washing car windows, for example, and on all the other above-ground equivalents of turnstile-jumping and graffiti. “Previous police administration had been handcuffed by restrictions,” Bratton says. “We took the handcuffs off. We stepped up enforcement of the laws against public drunkenness and public urination and arrested repeat violators, including those who threw empty bottles on the street or were involved in even relatively minor damage to property. . . . If you peed in the street, you were going to jail.” When crime began to fall in the city — as quickly and dramatically as it had in the subways — Bratton and Giuliani pointed to the same cause. Minor, seemingly insignificant quality-of-life crimes, they said, were Tipping Points for violent crime.

**Broken Windows theory and the Power of Context are one and the same.** They are both based on the premise that an epidemic can be reversed, can be tipped, by tinkering with the smallest details of the immediate environment. This is, if you think about it, quite a radical idea. Think back, for instance, to the encounter between Bernie Goetz and those four youths on the subway: Allen, Ramseur, Cabey, and Canty. At least two of them, according to some reports, appear to have been on drugs at the time of the incident. They all came from the Claremont Village housing project in one of the worst parts of the South Bronx. Cabey was, at the time, under indictment for armed robbery. Canty had a prior felony arrest for possession of stolen property. Allen had been previously arrested for attempted assault. Allen, Canty, and Ramseur also all had misdemeanor convictions, ranging from criminal mischief to petty larceny. Two years after the Goetz shooting, Ramseur was sentenced to twenty-five years in prison for rape, robbery, sodomy, sexual abuse, assault, criminal use of a firearm, and possession of stolen property. It’s hard to be surprised when people like this wind up in the middle of a violent incident.

Then there’s Goetz. He did something that is completely anomalous. White professionals do not, as a rule, shoot young black men on the subway. But if you look closely at who he was, he fits the stereotype of the kind of person who ends up in violent situations. His father was a strict disciplinarian with a harsh temper, and Goetz was often the focus of his father’s rage. At school, he was the one teased by classmates, the last one picked for school games, a lonely child who would often leave school in tears. He worked, after graduating from college, for Westinghouse, building nuclear submarines. But he didn’t last long. He was constantly clashing with his superiors over what he saw as shoddy practices and corner-cutting, and sometimes broke company and union rules by doing work that he was contractually forbidden to do. He took an apartment on Fourteenth Street in Manhattan, near Sixth Avenue, on a stretch of city block that was then heavy with homelessness and drug dealing. One of the doormen in the building, with whom Goetz was close, was beaten badly by muggers. Goetz became obsessed with cleaning up the neighborhood. He complained endlessly about a
vacant newsstand near his building, which was used by vagrants as a trash bin and stank of urine. One night, mysteriously, it burned down, and the next day Goetz was out on the street sweeping away the debris. Once at a community meeting, he said, to the shock of others in the room, "The only way we're going to clean up this street is to get rid of the spics and niggers." In 1981, Goetz was mugged by three black youths as he entered the Canal Street station one afternoon. He ran out of the station with the three of them in pursuit. They grabbed the electronics equipment he was carrying, beat him, and threw him up against a plate-glass door, leaving him with permanent damage to his chest. With the help of an off-duty sanitation worker, Goetz managed to subdue one of his three attackers. But the experience left him embittered. He had to spend six hours in the station house, talking to police, while his assailant was released after two hours and charged, in the end, with only a misdemeanor. He applied to the city for a gun permit. He was turned down. In September 1984, his father died. Three months later, he sat down next to four black youths on the subway and started shooting.

Here, in short, was a man with an authority problem, with a strong sense that the system wasn't working, who had been the recent target of humiliation. Lillian Rubin, Goetz's biographer, writes that his choice to live on Fourteenth Street could hardly have been an accident. "For Bernie," she writes, "there seems to be something seductive about the setting. Precisely because of its deficits and discomforts, it provided him with a comprehensible target for the rage that lives inside him. By focusing it on the external world, he need not deal with his internal one. He rails about the dirt, the noise, the drunks, the crime, the pushers, the junkies. And all with good reason." Goetz's bullets, Rubin concludes, were "aimed at targets that existed as much in his past as in the present."

If you think of what happened on the number two train this way, the shooting begins to feel inevitable. Four hoodlums confront a man with apparent psychological problems. That the shooting took place on the subway seems incidental. Goetz would have shot those four kids if he had been sitting in a Burger King. Most of the formal explanations we use for criminal behavior follow along the same logic. Psychiatrists talk about criminals as people with stunted psychological development, people who have had pathological relationships with their parents, who lack adequate role models. There is a relatively new literature that talks about genes that may or may not dispose certain individuals to crime. On the popular side, there are endless numbers of books by conservatives talking about crime as a consequence of moral failure—of communities and schools and parents who no longer raise children with a respect for right and wrong. All of those theories are essentially ways of saying that the criminal is a personality type—a personality type distinguished by an insensitivity to the norms of normal society. People with stunted psychological development don't understand how to conduct healthy relationships. People with genetic predispositions to violence fly off the handle when normal people keep their cool. People who aren't taught right from wrong are oblivious to what is and what is not appropriate behavior. People who grow up
poor, fatherless, and buffeted by racism don’t have the same commitment to social norms as those from healthy middle-class homes. Bernie Goetz and those four thugs on the subway were, in this sense, prisoners of their own, dysfunctional, world.

But what do Broken Windows and the Power of Context suggest? Exactly the opposite. They say that the criminal — far from being someone who acts for fundamental, intrinsic reasons and who lives in his own world — is actually someone acutely sensitive to his environment, who is alert to all kinds of cues, and who is prompted to commit crimes based on his perception of the world around him. That is an incredibly radical — and in some sense unbelievable — idea. There is an even more radical dimension here. The Power of Context is an environmental argument. It says that behavior is a function of social context. But it is a very strange kind of environmentalism. In the 1960s, liberals made a similar kind of argument, but when they talked about the importance of environment they were talking about the importance of fundamental social factors: crime, they said, was the result of social injustice, of structural economic inequities, of unemployment, of racism, of decades of institutional and social neglect, so that if you wanted to stop crime you had to undertake some fairly heroic steps. But the Power of Context says that what really matters is little things. The Power of Context says that the showdown on the subway between Bernie Goetz and those four youths had very little to do, in the end, with the tangled psychological pathology of Goetz, and very little as well to do with the background and poverty of the four youths who accosted him, and everything to do with the message sent by the graffiti on the walls and the disorder at the turnstiles. The Power of Context says you don’t have to solve the big problems to solve crime. You can prevent crimes just by scrubbing off graffiti and arresting fare-beaters: crime epidemics have Tipping Points every bit as simple and straightforward as syphilis in Baltimore or a fashion trend like Hush Puppies. This is what I meant when I called the Power of Context a radical theory. Giuliani and Bratton — far from being conservatives, as they are commonly identified — actually represent on the question of crime the most extreme liberal position imaginable, a position so extreme that it is almost impossible to accept. How can it be that what was going on in Bernie Goetz’s head doesn’t matter? And if it is really true that it doesn’t matter, why is that fact so hard to believe?

4.

In chapter 2, when I was discussing what made someone like Mark Alpert so important in word-of-mouth epidemics, I talked about two seemingly counterintuitive aspects of persuasion. One was the study that showed how people who watched Peter Jennings on ABC were more likely to vote Republican than people who watched either Tom Brokaw or Dan Rather because, in some unconscious way, Jennings was able to signal his affection for Republican candidates. The second study showed how people who were charismatic could — without saying anything and with the briefest of exposures — infect others with their emotions. The implications of those two studies go
to the heart of the Law of the Few, because they suggest that what we think of as inner states — preferences and emotions — are actually powerfully and imperceptibly influenced by seemingly inconsequential personal influences, by a newscaster we watch for a few minutes a day or by someone we sit next to, in silence, in a two-minute experiment. The essence of the Power of Context is that the same thing is true for certain kinds of environments — that in ways that we don’t necessarily appreciate, our inner states are the result of our outer circumstances. The field of psychology is rich with experiments that demonstrate this fact. Let me give you just a few examples.

In the early 1970s, a group of social scientists at Stanford University, led by Philip Zimbardo, decided to create a mock prison in the basement of the university’s psychology building. They took a thirty-five-foot section of corridor and created a cell block with a prefabricated wall. Three small, six- by nine-foot cells were created from laboratory rooms and given steel-barred, black-painted doors. A closet was turned into a solitary confinement cell. The group then advertised in the local papers for volunteers, men who would agree to participate in the experiment. Seventy-five people applied, and from those Zimbardo and his colleagues picked the 21 who appeared the most normal and healthy on psychological tests. Half of the group were chosen, at random, to be guards, and were given uniforms and dark glasses and told that their responsibility was to keep order in the prison. The other half were told that they were to be prisoners. Zimbardo got the Palo Alto Police Department to “arrest” the prisoners in their homes, cuff them, bring them to the station house, charge them with a fictitious crime, fingerprint them, then blindfold them and bring them to the prison in the Psychology Department basement. Then they were stripped and given a prison uniform to wear, with a number on the front and back that was to serve as their only means of identification for the duration of their incarceration.

The purpose of the experiment was to try to find out why prisons are such nasty places. Was it because prisons are full of nasty people, or was it because prisons are such nasty environments that they make people nasty? In the answer to that question is obviously the answer to the question posed by Bernie Goetz and the subway cleanup, which is how much influence does immediate environment have on the way people behave? What Zimbardo found out shocked him. The guards, some of whom had previously identified themselves as pacifists, fell quickly into the role of hard-bitten disciplinarians. The first night they woke up the prisoners at two in the morning and made them do pushups, line up against the wall, and perform other arbitrary tasks. On the morning of the second day, the prisoners rebelled. They ripped off their numbers and barricaded themselves in their cells. The guards responded by stripping them, spraying them with fire extinguishers, and throwing the leader of the rebellion into solitary confinement. “There were times when we were pretty abusive, getting right in their faces and yelling at them,” one guard remembers. “It was part of the whole atmosphere of terror.” As the experiment progressed, the guards got systematically crueler and more sadistic. “What we were unprepared for was the intensity of the change and the speed at which it happened,” Zimbardo says. The
guards were making the prisoners say to one another they loved each other, and making them march down the hallway, in handcuffs, with paper bags over their heads. "It was completely the opposite from the way I conduct myself now," another guard remembers. "I think I was positively creative in terms of my mental cruelty." After 36 hours, one prisoner began to get hysterical, and had to be released. Four more then had to be released because of "extreme emotional depression, crying, rage, and acute anxiety." Zimbardo had originally intended to have the experiment run for two weeks. He called it off after six days. "I realize now," one prisoner said after the experiment was over, "that no matter how together I thought I was inside my head, my prisoner behavior was often less under my control than I realized." Another said: "I began to feel that I was losing my identity, that the person I call ——, the person who volunteered to get me into this prison (because it was a prison to me, it still is a prison to me, I don't regard it as an experiment or a simulation ... ) was distant from me, was remote, until finally I wasn't that person. I was 416. I was really my number and 416 was really going to have to decide what to do."

Zimbardo's conclusion was that there are specific situations so powerful that they can overwhelm our inherent predispositions. The key word here is situation. Zimbardo isn't talking about environment, about the major external influences on all of our lives. He's not denying that how we are raised by our parents affects who we are, or that the kind of schools we went to, the friends we have, or the neighborhoods we live in affect our behavior. All of these things are undoubtedly important. Nor is he denying that our genes play a role in determining who we are. Most psychologists believe that nature — genetics — accounts for about half of the reason why we tend to act the way we do. His point is simply that there are certain times and places and conditions when much of that can be swept away, that there are instances where you can take normal people from good schools and happy families and good neighborhoods and powerfully affect their behavior merely by changing the immediate details of their situation.

This same argument was made, perhaps more explicitly, in the 1920s in a landmark set of experiments by two New York-based researchers, Hugh Hartshorne and M. A. May. Hartshorne and May took as their subjects about eleven thousand schoolchildren between the ages of eight and sixteen, and over the course of several months they gave them literally dozens of tests, all designed to measure honesty. The types of tests that Hartshorne and May used are quite central to their conclusion, so I'll identify a number of them in some detail.

One set, for example, was simple aptitude tests developed by the Institute for Educational Research, a precursor to the group that now develops the SATs. In the sentence-completion test, children were asked to fill in words that had been left blank. For example: "The poor little—— has—— nothing to——; he is hungry." In the arithmetic test, children were given math questions like "When sugar costs 10 cents a pound, how much will five pounds cost" and asked to write their answers in the margin. The tests were given in only a fraction of the time usually needed for completion, so most children had lots of unanswered questions, and when the
time was up the tests were collected and graded. The following day the students were given the same kinds of tests again, with questions that were different but of equal difficulty. This time, though, the students were given an answer key and, under minimal supervision, told to grade their own papers. Hartshorne and May, in other words, had set up a sting operation. With the answers in hand and lots of unanswered questions, the students had ample opportunity to cheat. And with the previous day's tests in hand, Hartshorne and May could compare the first day's answers to the second, and get a good sense of how much each student was cheating.

Another set of tests was what are called speed tests, much simpler measures of ability. Students were given 36 pairs of numbers and told to add them. Or they were shown a sequence of several hundred randomly arranged letters of the alphabet and asked to read through them and underline all the A's. Students were allowed a minute to complete each of these tests. Then they were given another set of equivalent tests, only this time the time limit wasn't enforced at all, allowing the students to keep on working if they wanted to. In all, the two psychologists administered countless different tests in countless different situations. They had children undertake tests of physical ability, like chin-ups or broad jumps, and secretly observed them to see whether they cheated in reporting how well they did. They gave students tests to do at home, where they had ample opportunity to use dictionaries or ask for help, and compared those results to how they did on similar tests administered at school, where cheating was impossible. In the end, their results fill three thick volumes and, along the way, challenge a lot of preconceptions of what character is.

Their first conclusion is, unsurprisingly, that lots of cheating goes on. In one case, the scores on tests where cheating was possible were 50 percent higher, on average, than the “honest” scores. When Hartshorne and May began to look for patterns in the cheating, some of their findings were equally obvious. Smart children cheat a little less than less-intelligent children. Girls cheat about as much as boys. Older children cheat more than younger children, and those from stable and happy homes cheat a bit less than those from unstable and unhappy homes. If you analyze the data you can find general patterns of behavioral consistency from test to test.

But the consistency isn't nearly as high as you might expect. There isn't one tight little circle of cheaters and one tight little circle of honest students. Some kids cheat at home but not at school; some kids cheat at school but not at home. Whether or not a child cheated on, say, the word completion test was not an iron-clad predictor of whether he or she would cheat on, say, the underlining A's part of the speed test. If you gave the same group of kids the same test, under the same circumstances six months apart, Hartshorne and May found, the same kids would cheat in the same ways in both cases. But once you changed any of those variables — the material on the test, or the situation in which it was administered — the kinds of cheating would change as well.

What Hartshorne and May concluded, then, is that something like honesty isn't a fundamental trait, or what they called a “unified” trait. A trait like honesty, they
concluded, is considerably influenced by the situation. “Most children,” they wrote,

will deceive in certain situations and not in others. Lying, cheating, and stealing as measured by the test situations used in these studies are only very loosely related. Even cheating in the classroom is rather highly specific, for a child may cheat on an arithmetic test and not on a spelling test, etc. Whether a child will practice deceit in any given situation depends in part on his intelligence, age, home background, and the like and in part on the nature of the situation itself and his particular relation to it.

This, I realize, seems wildly counterintuitive. If I asked you to describe the personality of your best friends, you could do so easily, and you wouldn’t say things like “My friend Howard is incredibly generous, but only when I ask him for things, not when his family asks him for things,” or “My friend Alice is wonderfully honest when it comes to her personal life, but at work she can be very slippery.” You would say, instead, that your friend Howard is generous and your friend Alice is honest. All of us, when it comes to personality, naturally think in terms of absolutes: that a person is a certain way or is not a certain way. But what Zimbardo and Hartshorne and May are suggesting is that this is a mistake, that when we think only in terms of inherent traits and forget the role of situations, we’re deceiving ourselves about the real causes of human behavior.

Why do we make this mistake? It’s probably the result of the way evolution has structured our brain. For instance, anthropologists who study vervets find that these kinds of monkeys are really bad at picking up the significance of things like an antelope carcass hanging in a tree (which is a sure sign that a leopard is in the vicinity) or the presence of python tracks. Vervets have been known to waltz into a thicket, ignoring a fresh trail of python tracks, and then act stunned when they actually come across the snake itself. This doesn’t mean that vervets are stupid: they are very sophisticated when it comes to questions that have to do with other vervets. They can hear the call of a male vervet and recognize whether it comes from their own group or a neighboring group. If vervets hear a baby vervet’s cry of distress, they will look immediately not in the direction of the baby, but at its mother — they know instantly whose baby it is. A vervet, in other words, is very good at processing certain kinds of vervetish information, but not so good at processing other kinds of information.

The same is true of humans.

Consider the following brain teaser. Suppose I give you four cards labeled with the letters $A$ and $D$ and the numerals 3 and 6. The rule of the game is that a card with a vowel on it always has an even number on the other side. Which of the cards would you have to turn over to prove this rule to be true? The answer is two: the $A$ card and the three card. The overwhelming majority of people given this test, though, don’t get it right. They tend to answer just the $A$ card, or the $A$ and the six. It’s a hard question. But now let me pose another question. Suppose four people are drinking in a bar. One is drinking Coke. One is sixteen. One is drinking beer and one is twenty-five. Given the rule that no one under twenty-one is allowed to drink beer, which of those people’s IDs do we have to check to make sure the
law is being observed? Now the answer is easy. In fact, I'm sure that almost everyone will get it right: the beer drinker and the sixteen-year-old. But, as the psychologist Leda Cosmides (who dreamt up this example) points out, it is exactly the same puzzle as the A, D, 3, and 6 puzzle. The difference is that it is framed in a way that makes it about people, instead of about numbers, and as human beings we are a lot more sophisticated about each other than we are about the abstract world.

The mistake we make in thinking of character as something unified and all-encompassing is very similar to a kind of blind spot in the way we process information. Psychologists call this tendency the Fundamental Attribution Error (FAE), which is a fancy way of saying that when it comes to interpreting other people's behavior, human beings invariably make the mistake of overestimating the importance of fundamental character traits and underestimating the importance of the situation and context. We will always reach for a "dispositional" explanation for events, as opposed to a contextual explanation. In one experiment, for instance, a group of people are told to watch two sets of similarly talented basketball players, the first of whom are shooting baskets in a well-lighted gym and the second of whom are shooting baskets in a badly lighted gym (and obviously missing a lot of shots). Then they are asked to judge how good the players were. The players in the well-lighted gym were considered superior. In another example, a group of people are brought in for an experiment and told they are going to play a quiz game. They are paired off and they draw lots. One person gets a card that says he or she is going to be the "Contestant."

The other is told he or she is going to be the "Questioner." The Questioner is then asked to draw up a list of ten "challenging but not impossible" questions based on areas of particular interest or expertise, so someone who is into Ukrainian folk music might come up with a series of questions based on Ukrainian folk music. The questions are posed to the Contestant, and after the quiz is over, both parties are asked to estimate the level of general knowledge of the other. Invariably, the Contestants rate the Questioners as being a lot smarter than they themselves are.

You can do these kinds of experiments a thousand different ways and the answer almost always comes out the same way. This happens even when you give people a clear and immediate environmental explanation of the behavior they are being asked to evaluate: that the gym, in the first case, has few lights on; that the Contestant is being asked to answer the most impossibly biased and rigged set of questions. In the end, this doesn't make much difference. There is something in all of us that makes us instinctively want to explain the world around us in terms of people's essential attributes: he's a better basketball player, that person is smarter than I am.

We do this because, like vervets, we are a lot more attuned to personal cues than contextual cues. The FAE also makes the world a much simpler and more understandable place. In recent years, for example, there has been much interest in the idea that one of the most fundamental factors in explaining personality is birth order: older siblings are domineering and conservative, younger siblings more creative and rebellious. When psychologists actually try to verify this claim, however, their answers
sound like the Hartshorne and May conclusions. We do reflect the influences of birth order but, as the psychologist Judith Harris points out in *The Nurture Assumption*, only around our families. When they are away from their families — in different contexts — older siblings are no more likely to be domineering and younger siblings no more likely to be rebellious than anyone else. The birth order myth is an example of the FAE in action. But you can see why we are so drawn to it. It is much easier to define people just in terms of their family personality. It's a kind of shorthand. If we constantly had to qualify every assessment of those around us, how would we make sense of the world? How much harder would it be to make the thousands of decisions we are required to make about whether we like someone or love someone or trust someone or want to give someone advice? The psychologist Walter Mischel argues that the human mind has a kind of “reducing valve” that “creates and maintains the perception of continuity even in the face of perpetual observed changes in actual behavior.” He writes:

When we observe a woman who seems hostile and fiercely independent some of the time but passive, dependent, feminine, aggressive, warm, castrating person all-in-one. Of course which of these she is at any particular moment would not be random or capricious — it would depend on who she is with, when, how, and much, much more. But each of these aspects of her self may be a quite genuine and real aspect of her total being.

Character, then, isn’t what we think it is or, rather, what we want it to be. It isn’t a stable, easily identifiable set of closely related traits, and it only seems that way because of a glitch in the way our brains are organized. Character is more like a bundle of habits and tendencies and interests, loosely bound together and dependent, at certain times, on circumstance and context. The reason that most of us seem to have a consistent character is that most of us are really good at controlling our environment. I have a lot of fun at dinner parties. As I result, I throw a lot of dinner parties and my friends see me there and think that I’m fun. But if I couldn’t have lots of dinner parties, if my friends instead tended to see me in lots of different situations over which I had little or no control — like, say, faced with four hostile youths in a filthy, broken-down subway — they probably wouldn’t think of me as fun anymore.

Some years ago two Princeton University psychologists, John Darley and Daniel Batson, decided to conduct a study inspired by the biblical story of the Good Samaritan. As you may recall, that story, from the New Testament Gospel of Luke, tells of a traveler who has been
beaten and robbed and left for dead by the side of the road from Jerusalem to Jericho. Both a priest and a Levite — worthy, pious men — came upon the man but did not stop, “passing by on the other side.” The only man to help was a Samaritan — the member of a despised minority — who “went up to him and bound up his wounds” and took him to an inn. Darley and Batson decided to replicate that study at the Princeton Theological Seminary. This was an experiment very much in the tradition of the FAE, and it is an important demonstration of how the Power of Context has implications for the way we think about social epidemics of all kinds, not just violent crime.

Darley and Batson met with a group of seminarians, individually, and asked each one to prepare a short, extemporaneous talk on a given biblical theme, then walk over to a nearby building to present it. Along the way to the presentation, each student ran into a man slumped in an alley, head down, eyes closed, coughing and groaning. The question was, who would stop and help? Darley and Batson introduced three variables into the experiment, to make its results more meaningful. First, before the experiment even started, they gave the students a questionnaire about why they had chosen to study theology. Did they see religion as a means for personal and spiritual fulfillment? Or were they looking for a practical tool for finding meaning in everyday life? Then they varied the subject of the theme the students were asked to talk about. Some were asked to speak on the relevance of the professional clergy to the religious vocation. Others were given the parable of the Good Samaritan. Finally, the instructions given by the experimenters to each student varied as well.

In some of the cases, as he sent the students on their way, the experimenter would look at his watch and say, “Oh, you’re late. They were expecting you a few minutes ago. We’d better get moving.” In other cases, he would say, “It will be a few minutes before they’re ready for you, but you might as well head over now.”

If you ask people to predict which seminarians played the Good Samaritan (and subsequent studies have done just this) their answers are highly consistent. They almost all say that the students who entered the ministry to help people and those reminded of the importance of compassion by having just read the parable of the Good Samaritan will be the most likely to stop. Most of us, I think, would agree with those conclusions. In fact, neither of those factors made any difference. “It is hard to think of a context in which norms concerning helping those in distress are more salient than for a person thinking about the Good Samaritan, and yet it did not significantly increase helping behavior,” Darley and Batson concluded. “Indeed, on several occasions, a seminary student going to give his talk on the parable of the Good Samaritan literally stepped over the victim as he hurried on his way.” The only thing that really mattered was whether the student was in a rush. Of the group that was, 10 percent stopped to help. Of the group who knew they had a few minutes to spare, 63 percent stopped.

What this study is suggesting, in other words, is that the convictions of your heart and the actual contents of your thoughts are less important, in the end, in guiding your actions than the immediate context of your behavior. The words “Oh, you’re late” had the effect of making
someone who was ordinarily compassionate into someone who was indifferent to suffering — of turning someone, in that particular moment, into a different person. Epidemics are, at their root, about this very process of transformation. When we are trying to make an idea or attitude or product tip, we’re trying to change our audience in some small yet critical respect: we’re trying to infect them, sweep them up in our epidemic, convert them from hostility to acceptance. That can be done through the influence of special kinds of people, people of extraordinary personal connection. That’s the Law of the Few. It can be done by changing the content of communication, by making a message so memorable that it sticks in someone’s mind and compels them to action. That is the Stickiness Factor. I think that both of those laws make intuitive sense. But we need to remember that small changes in context can be just as important in tipping epidemics, even though that fact appears to violate some of our most deeply held assumptions about human nature.

This does not mean that our inner psychological states and personal histories are not important in explaining our behavior. An enormous percentage of those who engage in violent acts, for example, have some kind of psychiatric disorder or come from deeply disturbed backgrounds. But there is a world of difference between being inclined toward violence and actually committing a violent act. A crime is a relatively rare and aberrant event. For a crime to be committed, something extra, something additional, has to happen to tip a troubled person toward violence, and what the Power of Context is saying is that those Tipping Points may be as simple and trivial as everyday signs of disorder like graffiti and fare-beating. The implications of this idea are enormous. The previous notion that disposition is everything — that the cause of violent behavior is always “sociopathic personality” or “deficient superego” or the inability to delay gratification or some evil in the genes — is, in the end, the most passive and reactive of ideas about crime. It says that once you catch a criminal you can try to help him get better — give him Prozac, put him in therapy, try to rehabilitate him — but there is very little you can do to prevent crime from happening in the first place. The old understanding of handling crime epidemics leads inevitably to a preoccupation with defensive measures against crime. Put an extra lock on the door, to slow the burglar down and maybe encourage him to go next door. Lock up criminals for longer, so that they have less opportunity to do the rest of us harm. Move to the suburbs, to put as much distance as possible between yourself and the majority of criminals.

Once you understand that context matters, however, that specific and relatively small elements in the environment can serve as Tipping Points, that defeatism is turned upside down. Environmental Tipping Points are things that we can change: we can fix broken windows and clean up graffiti and change the signals that invite crime in the first place. Crime can be more than understood. It can be prevented. There is a broader dimension to this. Judith Harris has convincingly argued that peer influence and community influence are more important than family influence in determining how children turn out. Studies of juvenile delinquency and high school drop-out rates, for example, demonstrate that a child is better off in a good
neighborhood and a troubled family than he or she is in a troubled neighborhood and a good family. We spend so much time celebrating the importance and power of family influence that it may seem, at first blush, that this can’t be true. But in reality it is no more than an obvious and commonsensical extension of the Power of Context, because it says simply that children are powerfully shaped by their external environment, that the features of our immediate social and physical world—the streets we walk down, the people we encounter—play a huge role in shaping who we are and how we act. It isn’t just serious criminal behavior, in the end, that is sensitive to environmental cues, it is all behavior. Weird as it sounds, if you add up the meaning of the Stanford prison experiment and the New York subway experiment, they suggest that it is possible to be a better person on a clean street or in a clean subway than in one littered with trash and graffiti.

“In a situation like this, you’re in a combat situation,” Goetz told his neighbor Myra Friedman, in an anguished telephone call just days after the shooting. “You’re not thinking in a normal way. Your memory isn’t even working normally. You are so hyped up. Your vision actually changes. Your field of view changes. Your capabilities change. What you are capable of changes.” He acted, Goetz went on, “viciously and savagely. . . . If you corner a rat and you are about to butcher it, okay? The way I responded was viciously and savagely, just like that, like a rat.”

Of course he did. He was in a rat hole.

In 1996, a sometime actress and playwright by the name of Rebecca Wells published a book entitled Divine Secrets of the Ya-Ya Sisterhood. Its arrival in the bookstores was not a major literary event. Wells had written one previous book—Little Altars Everywhere—which had been a minor cult hit in and around her hometown of Seattle. But she was not Danielle Steel or Mary Higgins Clark. When Wells gave a reading soon after her book was published in Greenwich, Connecticut, there were seven people in the audience. She had a smattering of reviews here and there, mostly positive, and in the end her book sold a very respectable 15,000 copies in hardcover.

A year later, Ya-Ya Sisterhood came out in paperback. The first edition of 18,000 copies sold out in the first few months, exceeding expectations. By early summer, total paperback sales had reached 30,000, and both Wells and her editor began to get the sense that something strange
describing just how deeply embedded suicide had become in the teen culture of Micronesia.

A number of young boys who attempted suicide reported that they first saw or heard about it when they were 8 or 10 years old. Their suicide attempts appear in the spirit of imitative or experimental play. One 11-year-old boy, for example, hanged himself inside his house and when found he was already unconscious and his tongue protruding. He later explained that he wanted to "try" out hanging. He said that he did not want to die.

What is tragic about this is not that these little boys were experimenting. Experimenting is what little boys do. What is tragic is that they have chosen to experiment with something that you cannot experiment with. Unfortunately, there isn't ever going to be a safer form of suicide, to help save the teenagers of Micronesia. But there can be a safer form of smoking, and by paying attention to the Tipping Points of the addiction process we can make that safer, less sticky form of smoking possible.

not long ago a nurse by the name of Georgia Sadler began a campaign to increase knowledge and awareness of diabetes and breast cancer in the black community of San Diego. She wanted to create a grassroots movement toward prevention, and so she began setting up seminars in black churches around the city. The results, however, were disappointing. "There'd be maybe two hundred people in church, but we'd get only twenty or so to stay, and the people who were staying were people who already knew a lot about those diseases and just wanted to know more. It was very discouraging," Sadler couldn't get her message to tip outside of that small group.

She realized she needed a new context. "I guess people were tired and hungry after the service," she says. "We all have a busy life. People wanted to get home." She needed a place where women were relaxed, receptive to new ideas, and had the time and opportunity to hear something new.
She also needed a new messenger, someone who was a little bit Connector, a little bit Salesman, and a little bit Maven. She needed a new, stickier way of presenting the information. And she needed to make all those changes in such a way that she didn’t exceed the very small amount of money she’d cobbled together from various foundations and funding groups. Her solution? Move the campaign from black churches to beauty salons.

“It’s a captive audience,” Sadler says. “These women may be at a salon for anywhere from two hours to eight hours, if they’re having their hair braided.” The stylist also enjoys a special relationship with her client. “Once you find someone who can manage your hair, you’ll drive a hundred miles to see her. The stylist is your friend. She takes you through your high school graduation, your wedding, your first baby. It’s a long-term relationship. It’s a trusting relationship. You literally and figuratively let your hair down in a salon.” There is something about the profession of stylist, as well, that seems to attract a certain kind of person — someone who communicates easily and well with others, someone with a wide variety of acquaintances. “They’re natural conversationalists,” Sadler says. “They love talking to you. They tend to be very intuitive, because they have to keep an eye on you and see how you’re doing.”

She gathered together a group of stylists from the city for a series of training sessions. She brought in a folklorist to help coach the stylists in how to present their information about breast cancer in a compelling manner. “We wanted to rely on traditional methods of communication,” Sadler says. “This isn’t a classroom setting. We wanted this to be something that women wanted to share, that they wanted to pass on. And how much easier is it to hang the hooks of knowledge on a story?” Sadler kept a constant cycle of new information and gossipy tidbits and conversational starters about breast cancer flowing into the salons, so that each time a client came back, the stylist could seize on some new cue to start a conversation. She wrote the material up in large print, and put it on laminated sheets that would survive the rough and tumble of a busy hair salon. She set up an evaluation program to find out what was working and to see how successful she was in changing attitudes and getting women to have mammograms and diabetes tests, and what she found out was that her program worked. It is possible to do a lot with a little.

Over the course of The Tipping Point we’ve looked at a number of stories like this — from the battle against crime in New York to Lester Wunderman’s Columbia Record Club treasure hunt — and what they all have in common is their modesty. Sadler didn’t go to the National Cancer Institute or the California State Department of Health and ask for millions of dollars to run some elaborate, multimedia public awareness campaign. She didn’t go door to door through the neighborhoods of San Diego, signing women up for free mammograms. She didn’t bombard the airwaves with a persistent call for prevention and testing. Instead she took the small budget that she had and thought about how to use it more intelligently. She changed the context of her message. She changed the messenger, and she changed the message itself. She focused her efforts.

This is the first lesson of the Tipping Point. Starting epidemics requires concentrating resources on a few key
areas. The Law of the Few says that Connectors, Mavens, and Salesmen are responsible for starting word-of-mouth epidemics, which means that if you are interested in starting a word-of-mouth epidemic, your resources ought to be solely concentrated on those three groups. No one else matters. Telling William Dawes that the British were coming did nothing for the colonists of New England. But telling Paul Revere ultimately meant the difference between defeat and victory. The creators of Blue’s Clues developed a sophisticated, half-hour television show that children loved. But they realized that there was no way that children could remember and learn everything they needed to remember and learn from a single viewing. So they did what no one had ever done in television before. They ran the same show five times in a row. Sadler didn’t try to reach every woman in San Diego all at once. She took what resources she had and put them all into one critical place — the beauty salon.

A critic looking at these tightly focused, targeted interventions might dismiss them as Band-Aid solutions. But that phrase should not be considered a term of disparagement. The Band-Aid is an inexpensive, convenient, and remarkably versatile solution to an astonishing array of problems. In their history, Band-Aids have probably allowed millions of people to keep working or playing tennis or cooking or walking when they would otherwise have had to stop. The Band-Aid solution is actually the best kind of solution because it involves solving a problem with the minimum amount of effort and time and cost. We have, of course, an instinctive disdain for this kind of solution because there is something in all of us that feels that true answers to problems have to be comprehensive, that there is virtue in the dogged and indiscriminate application of effort, that slow and steady should win the race. The problem, of course, is that the indiscriminate application of effort is something that is not always possible. There are times when we need a convenient shortcut, a way to make a lot out of a little, and that is what Tipping Points, in the end, are all about.

The theory of Tipping Points requires, however, that we reframe the way we think about the world. I have spent a lot of time, in this book, talking about the idiosyncrasies of the way we relate to new information and to each other. We have trouble estimating dramatic, exponential change. We cannot conceive that a piece of paper folded over 50 times could reach the sun. There are abrupt limits to the number of cognitive categories we can make and the number of people we can truly love and the number of acquaintances we can truly know. We throw up our hands at a problem phrased in an abstract way, but have no difficulty at all solving the same problem rephrased as a social dilemma. All of these things are expressions of the peculiarities of the human mind and heart, a refutation of the notion that the way we function and communicate and process information is straightforward and transparent. It is not. It is messy and opaque. Sesame Street and Blue’s Clues succeed, in large part, because of things they do that are not obvious. Who would have known, beforehand, that Big Bird had to be on the same set as the adult characters? Or who could have predicted that going from 100 to 150 workers in a plant isn’t a problem, but going from 150 to 200 is a huge problem? In the phone book names test
and the Fundamental Attribution Error, they amount to a very different conclusion about what it means to be human. We are actually powerfully influenced by our surroundings, our immediate context, and the personalities of those around us. Taking the graffiti off the walls of New York’s subways turned New Yorkers into better citizens. Telling seminarians to hurry turned them into bad citizens. The suicide of a charismatic young Micronesian set off an epidemic of suicides that lasted for a decade. Putting a little gold box in the corner of a Columbia Record Club advertisement suddenly made record buying by mail seem irresistible. To look closely at complex behaviors like smoking or suicide or crime is to appreciate how suggestible we are in the face of what we see and hear, and how acutely sensitive we are to even the smallest details of everyday life. That’s why social change is so volatile and so often inexplicable, because it is the nature of all of us to be volatile and inexplicable.

But if there is difficulty and volatility in the world of the Tipping Point, there is a large measure of hopefulness as well. Merely by manipulating the size of a group, we can dramatically improve its receptivity to new ideas. By tinkering with the presentation of information, we can significantly improve its stickiness. Simply by finding and reaching those few special people who hold so much social power, we can shape the course of social epidemics. In the end, Tipping Points are a reaffirmation of the potential for change and the power of intelligent action. Look at the world around you. It may seem like an immovable, implacable place. It is not. With the slightest push — in just the right place — it can be tipped.

CHAPTER THREE: THE STICKINESS FACTOR

Page 91.

See also Jim Henson, The Works: The Art, the Magic, the Imagination (New York: Random House, 1993).

Page 91.
Virtually every time Sesame Street's educational value has been tested — and the show has been subject to more academic scrutiny than any television show in history — it has been proved to improve the reading and learning skills of its viewers. Most recently, a group of researchers at the University of Massachusetts and the University of Kansas went back and recontacted close to 600 children whose television watching as preschoolers they had tracked back in the 1980s. The kids were now all in high school, and the researchers found — to their astonishment — that the kids who had watched Sesame Street the most as four- and five-year-olds were still doing better in school than those who didn't. Even after controlling for things like parent's education, family size, and preschool vocabulary level, the Sesame Street watchers did better in high school in English, math, and science and they were also much more likely to read books for leisure than those who didn't watch the show, or who watched the show less. According to the study, for every hour per week of Sesame Street viewing, high-school grade point averages increased by .05, which means that a child who watched five hours of Sesame Street a week at age five was earning, on average, about one quarter of a grade level higher than a child of similar background who never watched the show. Somehow a single television show an hour long, watched over the course of no more than two or three years, was still making a difference twelve and fifteen years later.

This research is summarized in "Effects of Early Childhood Media Use on Adolescent Achievement" by the "Recontact" Project of the University of Massachusetts at Amherst and the University of Kansas, Lawrence (1995).

See also: John C. Wright and Aletha C. Huston, "Effects of educational TV viewing of lower income preschoolers on academic skills, school readiness, and school adjustment one to three years later," A Report to Children's Television Workshop, University of Kansas (1995).

Page 93.
Lester Wunderman has written a perfectly wonderful autobiography that tells the story of Columbia Record House and many other tales of direct marketing.


Page 96.

Page 100.
The best summary of the "active" theory of television watching is:


Page 102.
Palmer's work is written up in a number of places. For example:


Page 108.

Page 115.

Page 118.

CHAPTER FOUR: THE POWER OF CONTEXT (PART ONE)

Page 133.