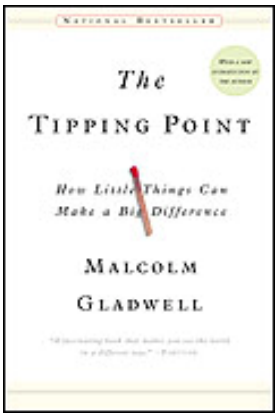
The Tipping Point

by Malcolm Gladwell



CHAPTER ONE

The Three Rules of Epidemics

In the mid-1990s, the city of Baltimore was attacked by an epidemic of syphilis. In the space of a year, from 1995 to 1996, the number of children born with the disease increased by 500 percent. If you look at Baltimore's syphilis rates on a graph, the line runs straight for years and then, when it hits 1995, rises almost at a right angle.

What caused Baltimore's syphilis problem to tip? According to the Centers for Disease Control, the problem was crack cocaine. Crack is known to cause a dramatic increase in the kind of risky sexual behavior that leads to the spread of things like HIV and syphilis. It brings far more people into poor areas to buy drugs, which then increases the likelihood that they will take an infection home with them to their own neighborhood. It changes the patterns of social connections between neighborhoods. Crack, the CDC said, was the little push that the syphilis problem needed to turn into a raging epidemic.

John Zenilman of Johns Hopkins University in Baltimore, an expert on sexually transmitted diseases, has another explanation: the breakdown of medical services in the city's poorest neighborhoods. "In 1990-91, we had thirty-six thousand patient visits at the city's sexually transmitted disease clinics," Zenilman says. "Then the city decided to gradually cut back because of budgetary problems. The number of clinicians [medical personnel] went from seventeen to ten. The number of physicians went from three to essentially nobody. Patient visits dropped to twenty-one thousand. There also was a similar drop in the amount of field outreach staff. There was a lot of politics — things that used to happen, like computer upgrades, didn't happen. It was a worst-case scenario of city bureaucracy not functioning. They would run out of drugs."

When there were 36,000 patient visits a year in the STD clinics of Baltimore's inner city, in other words, the disease was kept in equilibrium. At some point between 36,000 and 21,000 patient visits a year, according to Zenilman, the disease erupted. It began spilling out of the inner city, up the streets and highways that connect those neighborhoods to the rest of the city. Suddenly, people who might have been infectious for a week before getting treated were now going around infecting others for two or three or four weeks before they got cured. The breakdown in treatment made syphilis a much bigger issue than it had been before.

There is a third theory, which belongs to John Potterat, one of the country's leading epidemiologists. His culprits are the physical changes in those years affecting East and West Baltimore, the heavily depressed neighborhoods on either side of Baltimore's downtown, where the syphilis problem was centered. In the mid-1990s, he points out, the city of Baltimore embarked on a highly publicized policy of dynamiting the old 1960s-style public housing high-rises in East and West Baltimore. Two of the most publicized demolitions — Lexington Terrace in West Baltimore and Lafayette Courts in East Baltimore — were huge projects, housing hundreds of families, that served as centers for crime and infectious disease. At the same time, people began to move out of the old row houses in East and West Baltimore, as those began to deteriorate as well.

"It was absolutely striking," Potterat says, of the first time he toured East and West Baltimore. "Fifty percent of the row houses were boarded up, and there was also a process where they destroyed the projects. What happened was a kind of hollowing out. This fueled the diaspora. For years syphilis had been confined to a specific region of Baltimore, within highly confined sociosexual networks. The housing dislocation process served to move these people to other parts of Baltimore, and they took their syphilis and other behaviors with them."

What is interesting about these three explanations is that none of them is at all dramatic. The CDC thought that crack was the problem. But it wasn't as if crack came to Baltimore for the first time in 1995. It had been there for years. What they were saying is that there was a subtle increase in the severity of the crack problem in the mid-1990s, and that change was enough to set off the syphilis epidemic. Zenilman, likewise, wasn't saying that the STD clinics in Baltimore were shut down. They were simply scaled back, the number of clinicians cut from seventeen to ten. Nor was

Potterat saying that all Baltimore was hollowed out. All it took, he said, was the demolition of a handful of housing projects and the abandonment of homes in key downtown neighborhoods to send syphilis over the top. It takes only the smallest of changes to shatter an epidemic's equilibrium.

The second, and perhaps more interesting, fact about these explanations is that all of them are describing a very different way of tipping an epidemic. The CDC is talking about the overall context for the disease — how the introduction and growth of an addictive drug can so change the environment of a city that it can cause a disease to tip. Zenilman is talking about the disease itself. When the clinics were cut back, syphilis was given a second life. It had been an acute infection. It was now a chronic infection. It had become a lingering problem that stayed around for weeks. Potterat, for his part, was focused on the people who were carrying syphilis. Syphilis, he was saying, was a disease carried by a certain kind of person in Baltimore — a very poor, probably drug-using, sexually active individual. If that kind of person was suddenly transported from his or her old neighborhood to a new one — to a new part of town, where syphilis had never been a problem before — the disease would have an opportunity to tip.

There is more than one way to tip an epidemic, in other words. Epidemics are a function of the people who transmit infectious agents, the infectious agent itself, and the environment in which the infectious agent is operating. And when an epidemic tips, when it is jolted out of equilibrium, it tips because something has happened, some change has occurred in one (or two or three) of those areas. These three agents of change I call the Law of the Few, the Stickiness Factor, and the Power of Context.

1.

When we say that a handful of East Village kids started the Hush Puppies epidemic, or that the scattering of the residents of a few housing projects was sufficient to start Baltimore's syphilis epidemic, what we are really saying is that in a given process or system some people matter more than others. This is not, on the face of it, a particularly radical notion. Economists often talk about the 80/20 Principle, which is the idea that in any situation roughly 80 percent of the "work" will be done by 20 percent of the participants. In most societies, 20 percent of criminals commit 80 percent of crimes. Twenty percent of motorists cause 80 percent of all accidents. Twenty percent of beer drinkers drink 80 percent of all beer. When it comes to epidemics, though, this disproportionality becomes even more extreme: a tiny percentage of people do the majority of the work.

Potterat, for example, once did an analysis of a gonorrhea epidemic in Colorado Springs, Colorado, looking at everyone who came to a public health clinic for treatment of the disease over the space of six months. He found that about half of all the cases came, essentially, from four neighborhoods representing about 6 percent of the geographic area of the city. Half of those in that 6 percent, in turn, were socializing in the same six bars. Potterat then interviewed 768 people in that tiny subgroup and found that 600 of them either didn't give gonorrhea to anyone else or gave it to only one other person. These people he called nontransmitters. The ones causing the epidemic to grow — the ones who were infecting two and three and four and five others with their disease — were the remaining 168. In other words, in all of the city of Colorado Springs — a town of well in excess of 100,000 people — the epidemic of gonorrhea tipped because of the activities of 168 people living in four small neighborhoods and basically frequenting the same six bars.

Who were those 168 people? They aren't like you or me. They are people who go out every night, people who have vastly more sexual partners than the norm, people whose lives and behavior are well outside of the ordinary. In the mid-1990s, for example, in the pool halls and roller-skating rinks of East St. Louis, Missouri, there was a man named Darnell "Boss Man" McGee. He was big — over six feet — and charming, a talented skater, who wowed young girls with his exploits on the rink. His specialty was thirteen- and fourteen-year-olds. He bought them jewelry, took them for rides in his Cadillac, got them high on crack, and had sex with them. Between 1995 and 1997, when he was shot dead by an unknown assailant, he slept with at least 100 women and — it turned out later — infected at least 30 of them with HIV.

In the same two-year period, fifteen hundred miles away, near Buffalo, New York, another man — a kind of Boss Man clone — worked the distressed downtown streets of Jamestown. His name was Nushawn Williams, although he also went by the names "Face," "Sly," and "Shyteek." Williams juggled dozens of girls, maintaining three or four different apartments around the city, and all the while supporting himself by smuggling drugs up from the Bronx. (As one epidemiologist familiar with the case told me flatly, "The man was a genius. If I could get away with what Williams did, I'd never have to work a day again in my life.") Williams, like Boss Man, was a charmer. He would buy his girlfriends roses, let them braid his long hair, and host all-night marijuana and malt liquor-fueled orgies at his apartments. "I slept with him three or four times in one night," one of his partners remembered. "Me and him, we used to party together all the time. . . . After Face had sex, his friends would do it too. One would walk out, the other would walk in." Williams is now in jail. He is known to have infected at least sixteen of his former girlfriends with the AIDS virus. And most famously, in the book *And the Band Played On* Randy Shilts discusses at length the so-called Patient Zero of AIDS, the French-Canadian flight attendant Gaetan Dugas, who claimed to have 2,500 sexual partners

all over North America, and who was linked to at least 40 of the earliest cases of AIDS in California and New York. These are the kinds of people who make epidemics of disease tip.

Social epidemics work in exactly the same way. They are also driven by the efforts of a handful of exceptional people. In this case, it's not sexual appetites that set them apart. It's things like how sociable they are, or how energetic or knowledgeable or influential among their peers. In the case of Hush Puppies, the great mystery is how those shoes went from something worn by a few fashion-forward downtown Manhattan hipsters to being sold in malls across the country. What was the connection between the East Village and Middle America? The Law of the Few says the answer is that one of these exceptional people found out about the trend, and through social connections and energy and enthusiasm and personality spread the word about Hush Puppies just as people like Gaetan Dugas and Nushawn Williams were able to spread HIV.

2.

In Baltimore, when the city's public clinics suffered cutbacks, the nature of the syphilis affecting the city's poor neighborhoods changed. It used to be an acute infection, something that most people could get treated fairly quickly before they had a chance to infect many others. But with the cutbacks, syphilis increasingly became a chronic disease, and the disease's carriers had three or four or five times longer to pass on their infection. Epidemics tip because of the extraordinary efforts of a few select carriers. But they also sometimes tip when something happens to transform the epidemic agent itself.

This is a well-known principle in virology. The strains of flu that circulate at the beginning of each winter's flu epidemic are quite different from the strains of flu that circulate at the end. The most famous flu epidemic of all — the pandemic of 1918 — was first spotted in the spring of that year and was, relatively speaking, quite tame. But over the summer the virus underwent some strange transformation and over the next six months ended up killing between 20 and 40 million people worldwide. Nothing had changed in the way in which the virus was being spread. But the virus had suddenly become much more deadly.

The Dutch AIDS researcher Jaap Goudsmit argues that this same kind of dramatic transformation happened with HIV. Goudsmit's work focuses on what is known as *Pneumocystis carinii* pneumonia, or PCP. All of us carry the bacterium in our bodies, probably since birth or immediately thereafter. In most of us it is harmless. Our immune systems keep it in check easily. But if something, such as HIV, wipes out our immune system, it becomes so uncontrollable that it can cause a deadly form of pneumonia. PCP is so common among AIDS patients, in fact, that it has come to be seen as an almost certain indication of the presence of the virus. What Goudsmit did was go back in the medical literature and look for cases of PCP, and what he found is quite chilling. Just after World War II, beginning in the Baltic port city of Danzig and spreading through central Europe, there was an epidemic of PCP that claimed the lives of thousands of small children.

Goudsmit has analyzed one of the towns hit hardest by the PCP epidemic, the mining town of Heerlen in the Dutch province of Limburg. Heerlen had a training hospital for midwives called the Kweekschool voor Vroedvrouwen, a single unit of which — the so-called Swedish barrack — was used in the 1950s as a special ward for underweight or premature infants. Between June 1955 and July 1958, 81 infants in the Swedish barrack came down with PCP and 24 died. Goudsmit thinks that this was an early HIV epidemic, and that somehow the virus got into the hospital, and was spread from child to child by the then, apparently common, practice of using the same needles over and over again for blood transfusions or injections of antibiotics. He writes:

> Most likely at least one adult — probably a coal miner from Poland, Czechoslovakia, or Italy — brought the virus to Limburg. This one adult could have died from AIDS with little notice. . . . He could have transmitted the virus to his wife and offspring. His infected wife (or girlfriend) could have given birth in a Swedish barrack to a child who was HIV infected but seemingly healthy. Unsterilized needles and syringes could have spread the virus from child to child.

The truly strange thing about this story, of course, is that not all of the children died. Only a third did. The others did what today would seem almost impossible. They defeated HIV, purged it from their bodies, and went on to live healthy lives. In other words, the strains of HIV that were circulating back in the 1950s were a lot different from the strains of HIV that circulate today. They were every bit as contagious. But they were weak enough that most people — even small children — were able to fight them off and survive them. The HIV epidemic tipped in the early 1980s, in short, not just because of the enormous changes in sexual behavior in the gay communities that made it possible for the virus to spread rapidly. It also tipped because HIV itself changed. For one reason or another, the virus became a

lot deadlier. Once it infected you, you stayed infected. It stuck.

This idea of the importance of stickiness in tipping has enormous implications for the way we regard social epidemics as well. We tend to spend a lot of time thinking about how to make messages more contagious — how to reach as many people as possible with our products or ideas. But the hard part of communication is often figuring out how to make sure a message doesn't go in one ear and out the other. Stickiness means that a message makes an impact. You can't get it out of your head. It sticks in your memory. When Winston filter-tip cigarettes were introduced in the spring of 1954, for example, the company came up with the slogan "Winston tastes good like a cigarette should." At the time, the ungrammatical and somehow provocative use of "like" instead of "as" created a minor sensation. It was the kind of phrase that people talked about, like the famous Wendy's tag line from 1984 "Where's the beef?" In his history of the cigarette industry, Richard Kluger writes that the marketers at R. J. Reynolds, which sells Winston, were "delighted with the attention" and "made the offending slogan the lyric of a bouncy little jingle on television and radio, and wryly defended their syntax as a colloquialism rather than bad grammar." Within months of its introduction, on the strength of that catchy phrase, Winston tipped, racing past Parliament, Kent, and L&M into second place, behind Viceroy, in the American cigarette market. Within a few years, it was the bestselling brand in the country. To this day, if you say to most Americans "Winston tastes good," they can finish the phrase, "like a cigarette should." That's a classically sticky advertising line, and stickiness is a critical component in tipping. Unless you remember what I tell you, why would you ever change your behavior or buy my product or go to see my movie?

The Stickiness Factor says that there are specific ways of making a contagious message memorable; there are relatively simple changes in the presentation and structuring of information that can make a big difference in how much of an impact it makes.

3.

Every time someone in Baltimore comes to a public clinic for treatment of syphilis or gonorrhea, John Zenilman plugs his or her address into his computer, so that the case shows up as a little black star on a map of the city. It's rather like a medical version of the maps police departments put up on their walls, with pins marking where crimes have occurred. On Zenilman's map the neighborhoods of East and West Baltimore, on either side of the downtown core, tend to be thick with black stars. From those two spots, the cases radiate outward along the two central roadways that happen to cut through both neighborhoods. In the summer, when the incidence of sexually transmitted disease is highest, the clusters of black stars on the roads leading out of East and West Baltimore become thick with cases. The disease is on the move. But in the winter months, the map changes. When the weather turns cold, and the people of East and West Baltimore are much more likely to stay at home, away from the bars and clubs and street corners where sexual transactions are made, the stars in each neighborhood fade away.

The seasonal effect on the number of cases is so strong that it is not hard to imagine that a long, hard winter in Baltimore could be enough to slow or lessen substantially — at least for the season — the growth of the syphilis epidemic.

Epidemics, Zenilman's map demonstrates, are strongly influenced by their situation — by the circumstances and conditions and particulars of the environments in which they operate. This much is obvious. What is interesting, though, is how far this principle can be extended. It isn't just prosaic factors like the weather that influence behavior. Even the smallest and subtlest and most unexpected of factors can affect the way we act. One of the most infamous incidents in New York City history, for example, was the 1964 stabbing death of a young Queens woman by the name of Kitty Genovese. Genovese was chased by her assailant and attacked three times on the street, over the course of half an hour, as thirty-eight of her neighbors watched from their windows. During that time, however, none of the thirty-eight witnesses called the police. The case provoked rounds of self-recrimination. It became symbolic of the cold and dehumanizing effects of urban life. Abe Rosenthal, who would later become editor of the *New York Times*, wrote in a book about the case:

> Nobody can say why the thirty-eight did not lift the phone while Miss Genovese was being attacked, since they cannot say themselves. It can be assumed, however, that their apathy was indeed one of the big-city variety. It is almost a matter of psychological survival, if one is surrounded and pressed by millions of people, to prevent them from constantly impinging on you, and the only way to do this is to ignore them as often as possible. Indifference to one's neighbor and his troubles is a conditioned reflex in life in New York as it is in other big cities.

This is the kind of environmental explanation that makes intuitive sense to us. The anonymity and alienation of big-city life makes people hard and unfeeling. The truth about Genovese, however, turns out to be a little more complicated — and more interesting. Two New York City psychologists — Bibb Latane of Columbia University and John Darley of New York University — subsequently conducted a series of studies to try to understand what they dubbed

the "bystander problem." They staged emergencies of one kind or another in different situations in order to see who would come and help. What they found, surprisingly, was that the one factor above all else that predicted helping behavior was how many witnesses there were to the event.

In one experiment, for example, Latane and Darley had a student alone in a room stage an epileptic fit. When there was just one person next door, listening, that person rushed to the student's aid 85 percent of the time. But when subjects thought that there were four others also overhearing the seizure, they came to the student's aid only 31 percent of the time. In another experiment, people who saw smoke seeping out from under a doorway would report it 75 percent of the time when they were on their own, but the incident would be reported only 38 percent of the time when they were in a group. When people are in a group, in other words, responsibility for acting is diffused. They assume that someone else will make the call, or they assume that because no one else is acting, the apparent problem — the seizure-like sounds from the other room, the smoke from the door — isn't really a problem. In the case of Kitty Genovese, then, social psychologists like Latane and Darley argue, the lesson is not that no one called despite the fact that thirty-eight people heard her scream; it's that no one called *because* thirty-eight people heard her scream. Ironically, had she been attacked on a lonely street with just one witness, she might have lived.

The key to getting people to change their behavior, in other words, to care about their neighbor in distress, sometimes lies with the smallest details of their immediate situation. The Power of Context says that human beings are a lot more sensitive to their environment than they may seem.

4.

The three rules of the Tipping Point — the Law of the Few, the Stickiness Factor, the Power of Context — offer a way of making sense of epidemics. They provide us with direction for how to go about reaching a Tipping Point. The balance of this book will take these ideas and apply them to other puzzling situations and epidemics from the world around us. How do these three rules help us understand teenage smoking, for example, or the phenomenon of word of mouth, or crime, or the rise of a bestseller? The answers may surprise you.