



MISREMEMBRANCE OF THINGS PAST

Crime victims—like everyone else—often turn out to be highly unreliable in what they recall. So why are so many criminal cases built on little more, and how does the brain play such dangerous tricks? Sandy M. Fernández investigates

Until the last day of his 1983 trial for kidnapping and rape, A.B. Butler, Jr., never doubted he would be found innocent. Police had no physical evidence tying him to the crime: no fingerprints, no footprints, nothing left behind. Blood-type tests of the rapist's semen, at that time the cutting edge of forensic science, neither implicated nor excluded him. Plus, the victim's description of her attacker was different from him in several ways: He was four inches taller than the six feet she had indicated to police; he didn't smoke; and he had a gap in his front teeth and scars on his arms, neither of which she remembered.

"All kinds of things came up that

showed that I wasn't the person," he says today. "I knew I hadn't done this, and I was expecting to come out and be found not guilty."

The one devastating weapon in the prosecution's arsenal was the testimony of the victim herself. Tall and pretty, with a wide face and clear blue eyes, twenty-four-year-old Cathy Stevens* had spent the worst night of her life on Friday, May 20, of that year, and she shared every detail with the jury. After having dinner with her family, Stevens had driven across her home town of Tyler, Texas, to the Brass Star Club, a country-and-western honky-tonk where she'd heard that a man she'd been dating was going to be. In the parking lot,

she scribbled him a note on a bank-deposit slip and, leaving her door open, put it on his windshield. When she returned to her car and tried to shut the door, it stuck.

"What, if anything, did you see when you turned around and looked up?" Stevens was asked in court seven months later.

"I saw a black man," she answered.

"What went through your mind?"

"I was . . . scared, and it just—it took my breath away." (Stevens has never spoken to the media; her story has been gleaned from court transcripts and interviews with people close to her.)

The man, dressed in jeans, a jacket, and a green knit cap and holding a >

*Some names have been changed

large, wooden-handled kitchen knife, pushed her over on the Dart's seat and told her to shut up or he would kill her. Then he tore out of the parking lot onto Loop 323, the highway that encircles Tyler, and flew along it for about a mile and a half before turning north to follow smaller country roads. Eventually, he turned into a field, where he got the car stuck in the mud. He ordered her out of the vehicle with him. Several yards away, he raped her.

For nearly two more hours, Cathy Stevens would be stranded in that field with her attacker. "I would try to wander away, and he would say, 'Come back here,'" she testified. "He had the knife." Without any other way of getting the three or more miles back to town, the rapist and his victim worked together to get the car unstuck, digging at the mud and placing branches and the car's floor mats under the wheels. At one point, he raped her again. At another, the two of them sat under some trees and talked while he smoked a couple of cigarettes. "I should kill you, but I can't," he told her. Finally, he decided that they would walk back into town. But partway there, he suddenly said, "Well, you're on your own," gave her a quarter for a phone call, and walked off. After retracing her steps all the way back to the Brass Star, she called her parents. All in all, she had spent four hours with her attacker.

At the Tyler police station the next morning, she picked out twenty-nine-year-old mechanic A.B. Butler, Jr.'s mug shot from among the 3,400 that officers showed her. Ten days later, at a police lineup, she burst into tears and unhesitatingly picked him out again.

"Is there any doubt in your mind that this is the man that raped you?" Smith County assistant district attorney Richard Moore asked her at trial.

"I know that's the man," she answered.

"Unquestionably?"

"Unquestionably."

The jury agreed. After just fifty-four

minutes of deliberations, they found Butler guilty of both aggravated kidnapping and aggravated rape. "This girl was just so positive it was him," one juror would explain later. They sentenced him to the maximum, ninety-nine years for each charge. Butler would spend sixteen years of his life in jail for the crimes against Cathy Stevens. His family would spend thousands on attorneys and detectives trying to get him cleared, and both his parents would die while he was incarcerated. Finally, after numerous appeals, a DNA test in the summer of 1999 proved what Butler had alleged



A.B. BUTLER, JR., SPENT SIXTEEN YEARS IN PRISON FOR A CRIME HE DIDN'T COMMIT.

all along: He was not Cathy Stevens's rapist. Despite her four-hour ordeal and her indisputable honesty, Stevens had identified the wrong man.

As recently as a decade ago, Butler's wrongful conviction never would have come to light. Only with the development of today's sophisticated new DNA-testing techniques has the justice system gained the ability to return to some of its old cases and check the accuracy of its findings. The review has been sobering, especially in the area of eyewitness testimony: Of the eighty-one people exonerated by DNA since 1989, all but about 15 percent rested, at least in part, on

mistaken identification by the victim and/or other witnesses.

How can this happen? The key lies in the discrepancy between the way most of us think we remember, and the way we actually do. "People tend to think of memory as a snapshot or a movie reel—static," says University of Washington psychology professor Elizabeth Loftus, a researcher with thirty years in the field. "But it's not." Instead, memory is a live thing, as fragile and corruptible—if not more so—as other types of evidence. When it comes into contact with the hard edges of the criminal-justice system, often something has to give.

In 1902, a Berlin criminologist conducted the first witness memory experiment on record. He had two students stage a fight in the middle of his crowded university seminar: They argued, then one pulled a gun, the other lunged for it, and the gun went off. After the sound cleared and those present determined no one had been hurt, the professor demanded that students give their accounts of what had happened. The results were dismal: Everyone remembered it differently. "Words were put into the mouths of those who had been silent," reported a Harvard scholar a few years later. "[A]ctions were attributed . . . of which

not the slightest trace existed; and essential parts of the tragicomedy were completely eliminated." Even those with the best recollection made mistakes on 26 percent of significant details, while others were mistaken in 80 percent of what they remembered.

According to modern behavioral psychologists and neuroscientists, this variability is built into the very process of human memory. Every time the brain saves a new experience into long-term memory, it does so by creating proteins to physically encode it into the lobes. Research done last year by Karim Nader, PhD, and Glenn Schafe, PhD, both of the Center for Neural Science at New York University, >

revealed that the same process also takes place when we access a previously stored memory and then re-store it. This means every time a memory is reconsolidated, it is going to be, physically, a slightly different memory.

Nader and Schafe made their discovery by studying rats that had learned to associate a certain tone with an electric shock. Every time they played the tone, the rats froze in fear. Just after one of these tones, they injected the rats' brains with a drug that blocks protein synthesis—thus preventing them from being able to physically form new memories. Then they played the tone again. The rats barely noticed: Their memory of the electric shock had been blocked from being re-remembered. “When you open up a document on your computer, a copy stays on the hard drive,” explains Dr. Nader. “Your memory doesn't do that. Every time you pull something up, it re-saves it from scratch.”

One implication of this discovery is that when the memory is restored, it may well contain information that wasn't there before. “Let's say you're at the scene of a crime and later somebody says, ‘Did you see the guy in the red jacket?’” suggests Nader. “If you think about it and pull up the memory, it's possible that the erroneous information about the guy in the red jacket will get re-stored with it. And it will be exactly as if this is the way the memory always was.”

The neurological discovery only serves to back up theories that behavioral psychologists have held for decades. Since the early '70s, Elizabeth Loftus has been looking into the manufacture of false memories. Her first research, sponsored by the Department of Transportation, tested witness recall of accidents and crimes. In these early experiments, she showed people films of auto accidents and then questioned them about what they had seen. “I found the wording of the questions af-

fecting what people told me,” she recalls. “A question about how fast the cars were going when they ‘smashed into’ each other versus when they ‘hit’ each other got me very different estimates of speed. And more than just affecting the immediate answer, these word choices could actually create changes in the person's recollection. I would say, ‘By the way, did you see any broken glass?’ If I used the verb ‘smashed,’ they were more likely to say they remembered it.”

Since then, Loftus has tested the limits of what people will believe. In the early '90s, inspired by a rash of high-profile legal cases in the United States in which people claimed to have recovered early memories of satanic ritual abuse, she and a research associate decided to

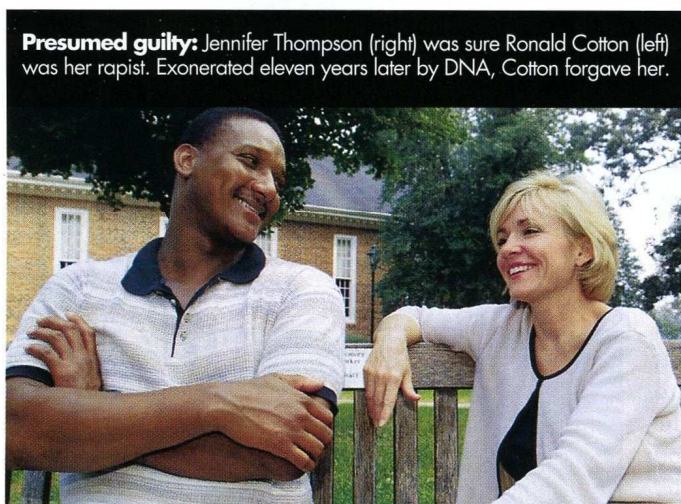
shown ads with messages like “The best part of my vacation was shaking hands with Bugs Bunny.” When they are questioned about their own, real vacations, up to 20 percent say they met Bugs—clearly impossible, Loftus points out, as he is not a Disney character. “We may all be suffering from a mass memory distortion,” she says.

In 1996, Iowa State University professor Gary L. Wells, an expert on memory and its social implications, found himself ushered into a meeting with then attorney general Janet Reno. Reno had grown concerned about the high proportion of DNA-exonerated men who had been convicted on the strength of faulty identifications and had convened a panel to put together a

law-enforcement guide for eyewitness testimony. Wells served on the panel, but remains somewhat bemused by its existence. “The literature in psychology already provided a strong case for reform before DNA even came up,” he says. Years of research show, for example, that the fear that crime victims commonly feel acts as a distorting force on the veracity of their memories. “There are two main responses

to fear: fight or flight. Either you attack or you flee. Neither is particularly conducive to observation,” says Wells. A person under threat may experience time as going slower than it is, and so overestimate how long, for example, they looked at a certain person. They may also focus on the source of their fear, seeing nothing but the gun that threatens them, or overestimating the size of the man who mugged them.

Another common problem is that, even at the best of times, people are not very good at identifying those of a different race, tending to focus on the other's most obvious racial characteristics—skin, hair, eyes—without really seeing the whole face. Other times, the race attributed will depend on one's own identity—in one case, a >



Presumed guilty: Jennifer Thompson (right) was sure Ronald Cotton (left) was her rapist. Exonerated eleven years later by DNA, Cotton forgave her.

see if they could make people “remember” totally made-up experiences. They gave twenty-four people small booklets purporting to contain four one-paragraph stories about incidents in their childhoods. Participants were told to either write what they remembered about each incident or write, “I do not remember this.” Three of these events, gleaned from conversations with a close relative, had actually happened to them. But one—an account of being lost in a shopping mall at age five—was completely false. Details of appropriate locales had been provided by participants' relatives. Six of the twenty-four participants claimed to recall either all or some of the false memory. Loftus is currently studying advertising's effect on memory. Subjects who had visited Disneyland are

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SPECIAL REPORT

Hispanic man and a Chinese man identified the same murder suspect as belonging to their own race.

After the crime, other pieces of information—from news reports, police, or neighbors—may come to muddy the victim's memory. In 1985, a woman raped in her bed in Alexandria, Virginia, told the police the next day that though her face had been covered during the attack, she had smelled "a kind of musky odor, a combination of sweat and alcohol and possibly cigarette smoke." Seven months later, at the trial of Walter Snyder, her description of that smell would change to "a combination of oil and a basement—a musty smell." Snyder happened to be a boiler repairman who lived in a basement apartment, facts that had apparently worked their way into the victim's memory. Snyder was exonerated by DNA in 1993.

Victims are also susceptible to a process experts call "unconscious transference," the substituting of one face for another from some other encounter. Several years ago, an Australian memory researcher by the name of Donald Thomson had an unsettling—and amazingly ironic—encounter with this phenomenon when he was accused of rape by a woman attacked in her house. Thomson had an airtight alibi—he had been on television, doing a live interview. It turned out the victim had seen his face on her TV during the attack, and substituted one for the other.

Memory transference can make other logic-defying leaps, like crossing racial barriers. In 1999, a Pennsylvania State University researcher showed sixty white undergrads a news report about a murder, with a mug

shot of a "suspect" superimposed for about ten seconds. Asked to recall the suspect three months later, the students showed a tendency to remember the white suspect as being black. Unfortunately, juries can't be counted on to question this sort of change. In 1985, a woman raped in Houston, Texas, initially described her assailant as "a white man, but he had an unusual color of skin . . . a honey-brown color, but he was not black." Four months later, she identified Kevin Byrd—unquestionably a black man. At trial, she said police officers had misunderstood her. Byrd served twelve years before his exoneration.

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In other instances of transference, an eyewitness who sees a suspect's photo may later think she recognizes him in a lineup, unaware that she is remembering him from a photo and not from the crime. This is all the more likely to happen if the lineup is somehow weighted toward that suspect. "Witnesses make judgments relevant to the people they are

seeing. They pick the person that looks most like the perpetrator," says Wells. "If only one looks kind of like their guy, that's going to give them a strong suggestion about who to pick."

This is the sort of process that may have brought Cathy Stevens and A.B. Butler, Jr., so tragically together. When Stevens picked Butler's mug shot, she told police, "It is awfully close. His beard, facial features, and build in the photograph look like [the rapist]. . . . I am not positive, but I think it's him." A little over a week later, she was reluctantly brought in to do a lineup. "She was afraid that if he was there, she'd have to face him," says her father, *(Continued on page 502)*

MISREMEMBRANCE

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Richard Stevens*. Butler didn't help his case. At the time, he had a serious drinking problem and was on probation for assault. Arrested that morning on what he considered a harassment charge, he was glowering. "I probably looked guilty," he says today. "I had rocks in my jaws." According to a lawyer who attended the lineup, Stevens broke down almost immediately, and identified Butler. Once that identification is made, Wells says, "the person who is identified becomes the memory. That's the image [witnesses] have in their heads."

The case of Jennifer Thompson and Ronald Cotton is a heartbreaking illustration of unconscious transference. For years, Thompson, an overachiever and former homecoming queen, hated the man she thought had raped her in her own bed when she was a college student living in Elon, North Carolina, in 1984. During the horrendous ordeal, Thompson had survived partially through channeling her intense drive into one thought: "I was going to make sure he paid for his crime." Using the light that came in through the windows, she examined him for details she could later give police, and just days later picked a man out of a photo array and a live lineup: Ronald Cotton, twenty-two, the son of a hog farmer and a mill worker, who police knew from a previous breaking-and-entering charge.

Cotton was sentenced to life in prison. "It was the happiest day of my life," Thompson says. In prison, Cotton heard that another inmate, a career criminal named Bobby Poole, was bragging that Cotton was doing time for his crime. But when the case was retried in 1987, Thompson failed to identify him. "I had no memory of Bobby Poole," Thompson explains. "When I had nightmares, I saw Ronald Cotton. His face was everywhere in my mind for years."

Thompson was sure the results would be the same in 1995, when she consented to participate in a DNA test. Instead, the results came back with a shocking revelation: The rapist had been Bobby

Poole. But even then, after she had spent days crying over putting an innocent man away for eleven years, Thompson could not get Cotton's image out of her head. "In my dreams, I still saw Ronald Cotton," she says. It was only in 1997, when Thompson asked to meet Cotton to ask his forgiveness, that those dreams began abating. "I said, 'If I spent every day of my life telling you I'm sorry, it wouldn't be enough,'" she recalls. But Cotton forgave her. Since then, the two of them have formed a friendship. They talk every couple of weeks, and have banded together to speak out against the death penalty and judicial reliance on eyewitness testimony. Now, Thompson's dreams are different: "It's more of a feeling I get, instead of seeing a face," she says. "I feel like the power of that night and what happened to me has dissipated. I've been able to take back control in my life."

Today, many experts are concerned with minimizing such misidentifications in the future. "When police go into a crime scene, they seal it off, to protect fingerprints or whatever else might be there. We should be taking that kind of care with people's memories," says leading criminal image profiler Jeanne Boylan. For the last two decades, Boylan has waged a quiet battle against the way that police departments gather eyewitness memories, and in particular, with the way most sketch artists put together their composites. "People are given these huge books of portraits and asked to choose from those faces the individual features—noses, eyes, chins—that match their assailants'. Well, we don't remember faces like that. Instead, [the new images] just cover over the image that is already there." Boylan is not a trained artist or police officer. Instead, she has developed her own technique, based on years of studying the psychological literature on memory and trauma. She sits with her witness for hours, even days, making conversation and now and then gleaning a piece of information about the attacker. It's been incredibly successful: She is the artist who did the startlingly accurate sketch of the Unabomber that showed up on *Newsweek's* cover, and the picture of

Richard Allen Davis, Polly Klaas's abductor, that got him caught. Boylan disagrees, though, about the impossibility of retrieving an original image. "It's in there," she says. "There's just a lot of other stuff piled on top of it."

Sitting in his new apartment today in

Tyler, A.B. Butler, Jr., is as serene as a Buddha. After sixteen years in prison, he has emerged to a completely different world: one with cell phones, e-mail, and new computerized cars that he can't understand, much less fix. But during his incarceration, he says, he found God, and today, he is reassured by the fact that "the truth came out." He is now involved in a romance with a woman who urged him to come to church with her when he left jail, and talks with pleasure about their plans to buy a small farm and raise organic meats.

Across town, however, memory's falsehood has not been so gently accepted. When DNA results exonerated Butler at the end of 1999, Cathy Stevens filed a statement with the district attorney's office. "My testimony today would be the very same as it was at trial," she wrote. "There is still no doubt in my mind that A.B. Butler, Jr., committed these crimes against me."

Sitting in a hotel lobby in Tyler, Richard Stevens*, her father, reiterates her position. "My daughter still believes he was guilty," Stevens says. "I mean, he was with her for such a long time. I don't know if DNA breaks down. I don't know if the evidence was in the same condition when it was tested as it was in the beginning. I don't know where it went on the way to those labs."

Stevens is a businessman, respected in the community, intelligent, thoughtful, and forthcoming. But he is barely able to keep still—bobbling his foot, shifting in his chair—as he struggles to reconcile his indiscriminate love for his daughter with the concrete facts of DNA. "From the standpoint of knowing her story, you think he has to be guilty. On the other hand, you look at the DNA and you think, My daughter is wrong." He shifts again in his chair. "If he was guilty, he has had to serve some time in jail. And if he wasn't"—his voice drops—"we're sorry." □