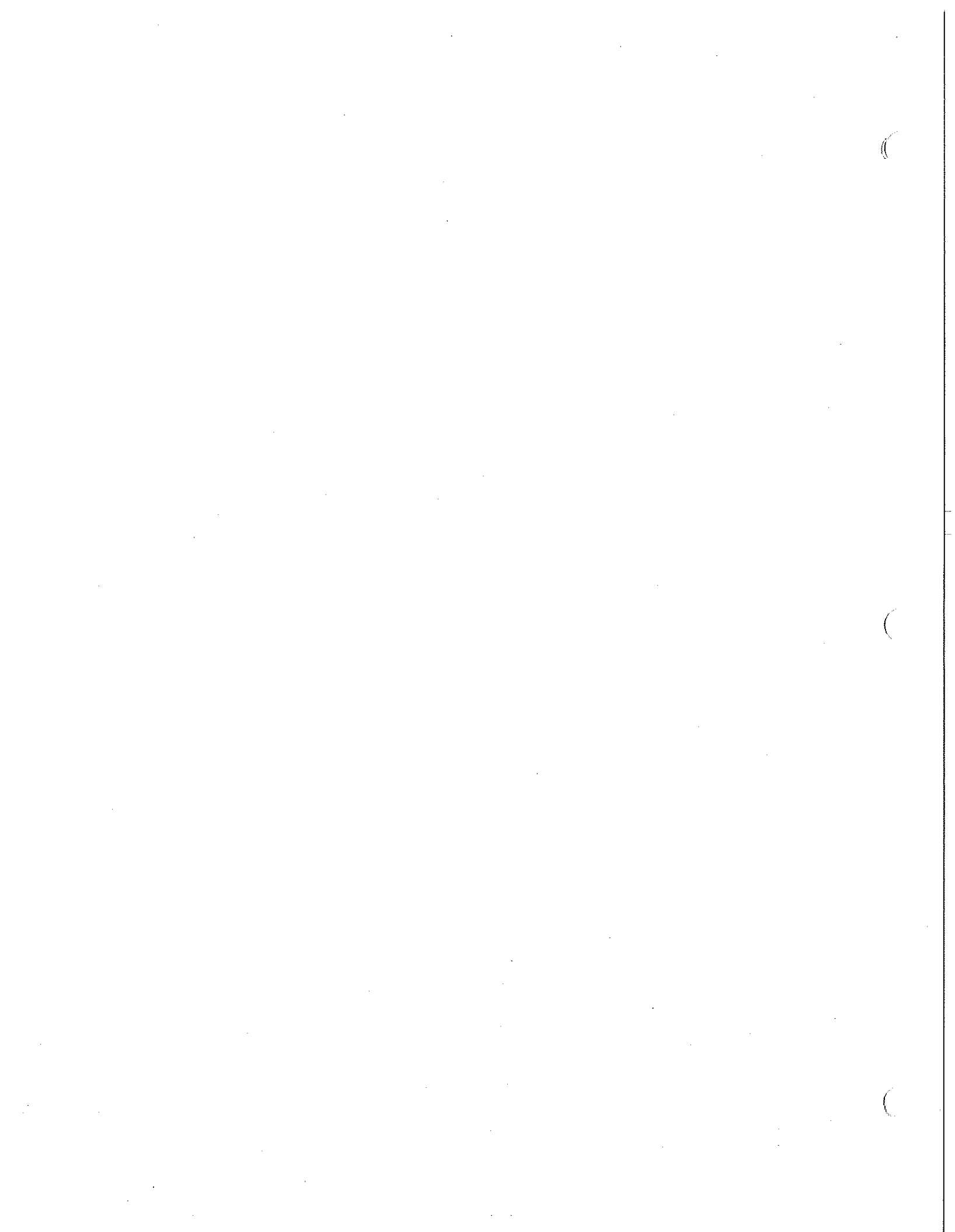


S



New Arson Science Could Prove Powerful in Overturning Old Beliefs

By Robert Tanner
Associated Press

EAST STROUDSBURG, Pa. — The clues were everywhere. A young woman lay dead in a burned cabin at a church camp, while her father survived.

Most of the lessons taught to budding fire investigators stood out at the scene. The local experts — the county fire marshal, a state-hired fire analyst, a chemist — spoke without hesitation that it all proved arson — and murder.

No one questioned their conclusion. It was a textbook case, and the father, Han Tak Lee, was dealt a guilty verdict and a life sentence.

Except the textbooks were wrong. Within a few years of Lee's conviction, scientific studies smashed decades of earlier, widely accepted beliefs about how fires work and the telltale trail they leave behind.

Today, fire investigators are taught that the clues relied upon in the 1989 investigation of the cabin fire don't prove anything more than an accident.

And some of the leading U.S. experts on arson say that Lee was the victim of a horrible tragedy, not a criminal. There could be hundreds more like him, people wrongfully convicted of arson, these experts say.

Pennsylvania courts have repeatedly rejected the argument that the prosecution's case was built on bad science.

"I never killed my daughter. I never set the fire. I'm not the right person to be here," Lee, now 71, said through a translator at Rockview medium-security prison in central Pennsylvania. "This is not arson. This is an accident."

A definitive count isn't possible, but leading fire investigators across the country estimate that there could be hundreds of mistaken arson prosecutions, all built on the same ideas that were uprooted more than a decade ago.

The new arson science could become the most powerful tool to reveal wrongful convictions since DNA testing began overturning rape and murder cases in 1989. Critics also say it's still happening, because some investigators continue to prosecute cases based on discredited methods.

"How do you know someone's guilty if you don't know a crime has been committed?"

said Richard Custer, a principal architect of a pivotal document on arson that helped bring the changes to light.

Another widely known investigator, John J. Lentini, has been a consultant on Lee's case, analyzing evidence and testimony.

His conclusion: "While the Commonwealth's witnesses may have believed that they were testifying truthfully, the fact is that the jury was misled by objectively false testimony."

The Lees were in Pennsylvania that morning 17 years ago because Han Tak Lee and his wife had hoped to heal their oldest daughter's mental problems.

Han Tak had come to New York City from South Korea and started a clothing business, working six days a week until he could bring his family over to join him.

Manic depression had surfaced a year or so after his oldest daughter, Ji Yun, had immigrated with her mother. Medication had helped. But things were unraveling again.

The family's Pentecostal pastor suggested the church retreat. Father, daughter and preacher prayed until the wee hours of the morning.

Then, the fire — one that, to investigators, pointed clearly to Lee. Part of the reason is what they were taught about arson in those days:

- Fires always burn up, not down.
- Fires that burn very fast are fueled by accelerants; "normal" fires burn slowly.
- Arsons fueled by accelerants burn hotter than "normal" fires.

• The clues to arson are clear. Burn holes on the floor indicate multiple points of origin. Finely cracked glass (called "crazed glass") proves a hotter-than-normal fire. So does the collapse of the springs in bedding or furniture, and the appearance of large blisters on charred wood, known as "aligatoring."

Firefighters and investigators arrived

at these conclusions through decades of observation. But those beliefs had never been given close scientific scrutiny until the 1970s and 1980s.

Once researchers began to apply the scientific method to beliefs about fire, they fell apart.

A major revelation came from greater understanding of a phenomenon known as "flashover." When a fire burns inside a structure, it sends heat and gases to the ceiling until it reaches a certain temperature — and then in a critical transition, everything combustible in that space will catch fire. Instead of a fire in a room, now there is a room on fire.

When that happens, it can leave any number of signs that investigators earlier thought meant arson — like the burn holes on the floor that used to prove multiple starting points. And it can cause a fire to burn down from the ceiling — not up.

Significantly, flashover can create very hot and very fast-moving fires. And it can occur within just a few minutes, dashing the concept that only arson fires fueled by accelerants can quickly rage out of control.

The studies began to chip away at the old beliefs, but it took years. Through the 1980s, texts at the National Fire Academy in Emmitsburg, Md., still taught the traditional techniques.

It wasn't until 1992 that a guide by the National Fire Protection Association — "NFPA921: Guide for Fire and Explosion Investigations" — clearly laid out, in a document relied upon by authorities nationwide, that the earlier beliefs were wrong.

"It's not that they're bad investigators or there's been any conspiracy to promulgate erroneous conclusions," said Custer, the former associate director of the national Fire Research Laboratory and one of the principal editors of the 1992 guide. "It's just the way it was."

'I never killed my daughter. I never set the fire. I'm not the right person to be here. This is not arson. This is an accident.'

Han Tak Lee

Convicted in a case that used discredited methods to prove arson

Returning Wrongful Convictions

"How many years did we think the Earth was flat?" he added.

In the hours before daybreak on July 29, 1989, police and firefighters quickly became suspicious.

Han Tak Lee seemed calm. He didn't cry. He sat on a bench across from the burning cabin with two bags of luggage at his feet.

State Trooper Thomas Jones, doubling as county fire marshal, wrote in his report a week later: "Mr. LEE remained almost emotionless and while in view of this officer made no attempts to console his wife (when she arrived from New York later that day). Mrs. LEE on the other hand was being escorted to the scene and upon nearing the burnt building almost collapsed and had to be physically assisted from the scene."

Prosecutor E. David Christine Jr. argued Lee's demeanor was that of a killer, not a grieving father.

But Koreans say that men traditionally don't express much emotion, and never in public. And Lee is nothing if not traditional, his wife and surviving daughter say.

Lee says now that, watching the cabin burn, he was overwhelmed and stunned into silence.

"I found that I just lost my spirit and my mind there. It felt like all the blood drained out of my body," he said. "In Korea, men are not allowed to cry. If your daughter is suddenly found dead, there's nothing you can do. You just lost your soul. You can't even think."

Lee's story didn't convince investigators. He claimed to have fallen asleep exhausted after praying and woke to the smell of smoke. Fire was in the small cabin's other bedroom, his daughter's bedroom. He ran out. She wasn't outside. He ran back, called for her, didn't hear or see her, thought she had already escaped. He threw the luggage out the door. He banged on the bathroom door and, overcome by smoke and fire, went out the back door.

With a crime already suspected, the pieces soon fit into place.

They found pour patterns on the floor that indicated multiple points of origin, "aligatored" charring, crazed glass, damaged furniture springs. Investigators had their evidence.

Lee's lawyer never disputed the conclu-

sion of arson. He argued instead that Ji Yun had started the fire herself to commit suicide.

The family has never accepted that. She viewed suicide as a sin, they say.

Jurors didn't accept the defense attorney's argument, either. They believed the experts.

On Sept. 17, 1990, they convicted Lee of murder. Several appeals before Pennsylvania courts have won him no relief.

Christine, still Monroe County's district attorney, did not return repeated phone calls. An assistant argued before the court that the new science was, in effect, simply two expert witnesses that have opposing views. A Pennsylvania state court agreed and rejected Lee's claim.

Lee's attorneys appealed that decision on Nov. 27 to the state Supreme Court.

Other experts have looked at Lee's case and agreed with Lentini's conclusions.

"That's a perfect example of a system run amok," said David M. Smith, a former city bomb and arson investigator in Tucson, Ariz., who retired to start his own investigation firm.

How many could be wrongfully convicted of arson?

There are 500,000 structure fires overall a year; 75,000 of them are labeled suspicious. Lentini, who has campaigned widely to improve investigators' knowledge, said most experts he talks with believe the accuracy of fire investigators is at best 80 percent — meaning as many as 15,000 mistaken investigations each year, and who knows how many convictions.

The hardest part is that there's often no clear, guilty party or explanation, as DNA can provide. In the Lee case, another defense investigator argued it started from a short in an electrical cord, but Lentini said the hard evidence either burned up or was ignored by the county investigators.

For the Lees, there's no getting past the tragedy that took Ji Yun. But they still want one more chance from the justice system.

In prison, Han Tak Lee exudes a kind of desperate hope as he meets with a reporter and translator. For the lone Korean speaker at the 2,061-inmate prison, it is a rare chance to hear his native language.

"I never regret," he said. "I have very strong faith. I will get out as a free man."

SFDJ 12/11/06 P.5