Study by Yale professor suggests best way to fight terror

By Doug Chandler

July 15, 2005 - NEW HAVEN-As he heard about the bombs ripping through parts of London's transit system last week, Edward H. Kaplan had "the same reaction as everyone else," he said. "It's a terrible thing."

But Kaplan, a professor at Yale and a member of the New Haven Jewish community, was also thinking of the study he and a colleague published only two days earlier in a journal of the National Academy of Sciences.

The study found that sensors or detectors deployed in urban areas to prevent suicide bombings are unlikely to save many lives, said Kaplan, a professor of management sciences and public health. In fact, Kaplan continued, the sensors could create even more casualties in some cases, as people close to the bomber flee the scene, enlarging the space in which bomb fragments can scatter.

"By reducing the crowd density, you're increasing the number of people who are going to get hurt," said Kaplan, who wrote the study with Moshe Kress, professor of operations research at the Naval Postgraduate School. The detection system "could backfire on you."

The researchers found that portal or checkpoint screening - detectors placed at airports, stadiums, government buildings and other known targets - could be useful in thwarting an attack. But the technology is simply ineffective in guarding against random attacks in such places as trains, restaurants and shops, they said.

"You'd have to have an awful lot of sensors" to stop an attack, Kaplan said, noting that "cities are big places," and the response from law-enforcement officials would have to be "pretty quick," before the bomber has a chance to detonate the explosives. The study, published July 5, suggests that the most effective means of preventing suicide bombings is through intelligence work, followed by arrests of terror operatives and suspects - the method adopted by Israel.

"The Israelis have figured out how to counter this," Kaplan said in a phone interview this week. The groundwork laid by Israeli authorities has "led to the interdiction of these bombers before they even get started."

Rather than playing "last-minute defense," authorities should aim at pushing terrorists as far away as possible, said Kaplan, who studied Israel's success in a previous study, "What Happened to Suicide Bombings in Israel?" Effective intelligence work would include infiltrating terror cells and eavesdropping, according to the professor.

Discussing last week's attack in London, Kaplan said his study about sensors isn't directly relevant because it appears that most of the attackers weren't suicide bombers and the city doesn't use detectors and shops, they said.

Cameras are spread throughout the city, but "no one who was monitoring these things saw anyone acting suspiciously," Kaplan said. Moreover, it is impossible to monitor all of the cameras simultaneously, which would require one person for each camera. He added, however, that the cameras' purpose lies more in investigating crimes than preventing them.

Kaplan, who holds three master's degrees and a doctorate from the Massachusetts Institute of Technology, specializes in operations research - the science of decision-making. Based on mathematical models, the science, he said, focuses "not only on how people make decisions, but on how to help people make better decisions."

The field began several decades ago, devoted at the time to military applications, said Kaplan, whose graduate degrees are in math, city planning and operations research and whose doctorate is in urban studies. But it spread to industrial applications and, later, to other uses,
including public policy, Kaplan's area.

The professor has conducted research into how best to prevent the spread of HIV, the virus that causes AIDS, and how to prepare for bioterrorism. Some of the studies have led to changes in government policy, receiving coverage from the New York Times, the Jerusalem Post and other media outlets.

Kaplan serves on the board of governors of Israel's Technion Institute and has been a visiting professor at the Hebrew University of Jerusalem. Locally, he and his family are members of Temple Beth Sholom in Hamden, a Conservative synagogue.

His suggestion to members of the Jewish community, as well as other citizens, is to be aware of terrorism but not to be cowed by it. People need to keep their eyes open and remain vigilant, he said. At the same time, though, they should also lead a normal life.

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