The Psychology of Airport Security:

A need for involvement from safety professionals

Airport security has dominated the news since the horrific terrorist attack on the World Trade Center and the Pentagon last September. Indeed, this tragic event brought the airline industry to its knees. Some went out of business; all trimmed their flight schedules and laid off personnel; and all but one American airline posted dramatic financial losses in the fourth quarter of 2001.

Of course, the issue is safety and security. Fear of air travel decreased dramatically after 9-11-2001, with numerous U.S. companies refusing to purchase airfares for their employees. Thus, attendance at conferences and workshops was down at the end of last year, including those which informed participants of specific ways to improve safety and security, such as the National Safety Conference and Exhibition in Atlanta and the Behavior Safety Now Conference in Houston. Any participant at these safety conferences could have learned practical and effective techniques for improving safety and security at our country's airports. At the very least, the safety professionals attending these conferences would not recommend some of the frivolous procedures currently practiced at airports to increase security.

Let's consider some of the current attempts to enhance airport security. Do they decrease the probability of an airplane hijacking? Do they increase the perception that air travel is safe? Are alternative techniques available to reduce the chances a weapon or bomb will be brought on board an airplane?

The Check-in Interview

Let's start with a security technique that probably does not improve airline safety and security, but is the most popular in terms of large-scale exposure to airline customers. Specifically, everyone who checks in at an airline ticket counter, a necessary step for all passengers, is asked a series of security questions. Have you packed your own bags? Have your bags been in your possession at all times? Has anyone unknown to you asked you to carry something on board?

Now really, does this increase anyone's sense of security on an airplane? Does it reduce any fear you might have regarding the possibility of a terrorist take-over of your airplane? It's obvious these checkpoint questions could influence only the *perception* of security. How could these questions possibly increase *actual* security? Would any wannabe terrorist answer "No" to the first two questions and "Yes" to the third? It's more likely an inexperienced or inattentive traveler would be "caught" with the wrong answer.

The Pre-Board Security Check

This security procedure has received the most scrutiny and media attention, as well as the most visible change since September 11th. This screening allows only airplane passengers to enter the boarding areas of a terminal. It checks for potential weapons or bombs in an individual's possession or in his or her carry-on luggage.

Passengers show their ticket and a driver's license (or another form of personal identification) and then put their carry-on belongings on a conveyor belt that passes through a device that displays all objects in the luggage containing

metal. At some airports, travelers are required to take off their shoes and put them on the conveyor belt. Then the passenger walks through an archway that sounds a tone if metal is detected. If a tone sounds, the individual is asked to walk through again. If the metal-detector sounds again, the traveler is asked to step aside for individual screening by a security officer with a hand-held metal detector.

Since September 11th, the major changes at this checkpoint include: a) the observation of passenger tickets and identification, b) the removal of shoes, and c) the presence of two or more National Guard personnel in battle dress uniform and armed with at least an M16-A2 rifle. Now the obvious question: Do these time-consuming and costly additions to the passenger-screening process enhance perceived and/or actual security? Will you feel more secure when the government controls this aspect of airport safety and security?

It's disappointing that the politicians who decided to transfer the responsibility of this screening procedure from the private to the government sector have limited knowledge and experience relevant to analyzing and solving safety-related problems. Let's examine this situation further and consider how a safety professional would improve it.

Attempts to Improve the Security Check

The media has raised public awareness of safety problems at passenger screening by reporting the confiscation of dangerous items beyond the airport security checkpoint. In one highly publicized incident, a traveler got by the security check at Chicago's O'Hare airport with seven knives. A portrayal of this event on CBS' "60 Minutes" made the report even more disconcerting by

including the testimony of an individual hired by the Federal Aviation

Administration (FAA) to conduct a series of tests of various airport security

checkpoints. This person reported that significant members of his team, as well

as teams contracted by the U.S. Department of Transportation got through the

screening areas with knives or fake bombs. Such media coverage severely

raises the rear factor regarding air travel. But more scary is the apparent lack of

knowledge about how to fix this problem.

News reports have uncovered critical weaknesses of the passenger-

screening procedures, such as the use of videotapes to train security agents and

true-false questions to test their competence. But I've seen no media

presentations of effective ways to improve this safety and security problem.

Instead of discussing how behavioral observation and feedback

techniques can be applied to improve the competency at any checkpoint, news

reporters and politicians discuss overriding concern about the education level of

the screeners. Instead of showing how intermittent attempts to sneak

contraband beyond an airport checkpoint can be used to maintain vigilance and

competency, the media reports how such tests are used to discredit the

competency of airport security personnel and their screening procedures.

Instead of letting the public know that the competency of a baggage check is

contingent on the use of behavioral observation and feedback methodology to

train and maintain an effective process, the media leads the public to believe

effective security screening is determined by such irrelevant factors as

personality characteristics and ethnicity of the checkpoint personnel, whether

they have a high-school education, and whether they are hired by the government or a private-sector business.

Where Do We Go From Here?

These are only a few of the issues we need to consider regarding the challenge of improving airport safety and security. It's clear the current screening procedures are less than adequate, and the people in charge of designing and implementing improvements need advice and guidance from safety professionals. For example, it's not clear that basic procedures to train, conduct, and evaluate safety auditing are currently followed. And some screening procedures, like the questions asked airline passengers at ticket counters, are perhaps frivolous.

Of course, decisions to eliminate certain security procedures and substitute others should not be based on biased observations, subjective opinion or common sense. This is a research issue, another domain needing input from safety pros with relevant experience. It is apparently difficult, however, to conduct research directly relevant to the psychology of safety and security at airports. For example, since the September 11th terrorist attack my students and I have made numerous attempts to contact authorities at the Roanoke Regional Airport regarding the administration of field interviews to study the perceptions of airline passengers. The airport director has not returned our phone calls nor responded to our faxed letters. Researching the public's perceptions regarding airport security must apparently be compromised in order to focus on the implementation of government-mandated security procedures defined by one or more persons' common sense.

In Conclusion

This presentation entertained only a fraction of the security measures currently in place to prevent another terrorist takeover of an airplane. These are, however, the procedures most visible to the public and most likely to influence the psychology of airline safety and security. Why is this important? Well, the perception of safety will determine how quickly the airline industry can recover from the catastrophic events of September 11th, etched permanently in our memories for the rest of our lives.

Various principles and procedures of behavioral psychology can improve passenger and baggage screening – from training and implementing a rigorous observation and detection process to continuously evaluating and refining specific process procedures. It seems, however, this research-founded information relevant to improving the human dynamics of airline safety and security are not being applied. Safety pros know better. Our challenge is to get such knowledge to those in charge of doing better.

E. Scott Geller, Ph.D.
Professor and Director
Center for Applied Behavior Systems
Virginia Tech

Dr. Geller and his partners at Safety Performance Solutions help organizations use psychology-based techniques to achieve an injury-free workplace. For more information about related books, training programs, video and audiotapes, and customized consulting and training options please visit safety@safetyperformance.com or call us at 54-951-7233.