Pre-Crime Detection Scanners Heighten Legal and Scientific Debates

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By Krystina Steffen, *staff writer – November 17, 2011*

The Department of Homeland Security has already successfully tested a pre-crime detection scanner on humans. Barring the legal hurdles and public response once this is officially unveiled, these scanners will gauge facial expressions and other biometric data to detect if someone is giving cues for mal-intent. [1] The DHS' algorithm also includes scanning a person's gender, ethnicity, breathing, and heart rate in a non-intrusive way via video and audio scanning. The DHS would like to utilize this technology not only at airports, but in bigger settings such as sporting events, border checkpoints, and more.

As society gets acclimated to full body scanners at many U.S. airports, it begs the question of having scanning in more facets of our life. Remote sensors could become a reality to track our eye movement, thermal cameras could target our respiration, and high-resolution videos could detect a whisper or subtle movements of the eyebrow. Pheromone detection is also on the table. [2]

Does society agree that it is worth our safety interests to be watched in every public space or will this cross certain privacy rights? Or does society feel that it is okay to be watched at an airport or voting center, for example, but not at a sporting event or in a neighborhood where police want to crack down?

The pre-crime system is called Future Attribute Screening Technology, or FAST. The initial trials of the system were done on volunteer employees from DHS. The volunteers were tested for signs of stress, which some associate with the intention to carry out a crime. For all those that have seen an episode of "Locked Up Abroad" or "Person of Interest", this idea makes senses. Erratic eye movements, body heat and labored breathing, speech variations, and body movements give many criminals away before a crime is committed. But in the airport setting, for example, what happens to people that are stressed because the airline messed up their flight, are afraid of flying, or flying due to a family emergency? These stressors could land a person in an interrogation room and waste a huge amount of taxpayer money chasing the wrong person.

DHS has been developing this technology with the assistance of independent laboratories since 2008. [3] The system is designed to notify screeners, in whatever setting they would be stationed at, of individuals who fit the algorithm's assessment of probability to carry out a crime. The privacy office at the DHS notes that FAST is not created to store information with a person's data and private information all in one. Data is "…stored under an anonymous identifier and is only available to DHS as aggregated performance data." [4] But what about situations where a person's biometrics are read incorrectly, and then the person is interrogated and detained wrongfully? How can a defense attorney subpoena the records accurately for his or her client to know how to present the case and further investigate it?

The Electronic Privacy Information Center has been pressing the DHS for records of the FAST program through the Freedom of Information Act. EPIC, like many in society, are concerned about the prevalence of surveillance online and offline. The center wants to show the public what this program could entail, how it could affect our privacy rights, and whether off-body measurements and interrogation techniques using biometrics are valid.

"If it were deployed against the public, it would be very problematic," said EPIC's open government counsel Ginger McCall. "…Especially if they're going to be rolling this out at the airport. I don't know about you, but going to an airport gives me a minor panic attack, wondering if I'm going to get groped by a TSA officer." [5]

The current uproar revolves around when FAST was tested by 140 volunteers earlier this year, some of whom were told to cause a disruption to analyze the system. This was done in an undisclosed Northeast U.S. airport. DHS has reported that it "…was 78 percent successful on detection of malintent and 80 percent on deception." [6] This is undoubtedly a double-edged sword – a large portion of potential criminals could be caught, but the numbers also show around 20 percent of people without mal-intention would be held back by screeners. The investigation methods these innocent people would be subject to could cause them undue stress, waste government resources, and delay efficiency in getting through any airport, let alone some other event. So it is worth it to have a system with some flaws for the greater good or are there other avenues to protect individuals without becoming a scene in "Minority Report"?

The U.S. courts have a mixed view of evidence from scanners, whether it is from a MRI, lie detectors, or novel scanning technology when trying a person for a crime. When error rates are high and scientific communities have not tested the application of the technology, it becomes a slippery-slope for scans to be valid evidence. [7]

"It is essential to recognize that law's concern is not solely whether the techniques are up to the justifiably robust standards of science," said law professor Francis X. Shen and Owen D. Jones in a symposium paper on "Brain Scans as Evidence". [8] "Law's concern is whether the techniques are meaningfully better than the next best alternative technique currently deployed in the legal process — which is often having a group of untrained jurors sit passively as they watch and listen to witnesses."

Facial expressions, body movements, and gestures can be used in tandem for more accuracy, some scientists say. The other side of the debate feels differently. Associating these actions with "…deception is a leap of gargantuan dimensions not supported by scientific evidence," notes John Jay College of Criminal Justice psychology professor Maria Hartwig. [9] With the current U.S. Supreme Court's decision on the *US v. Jones* GPS tracking device lawsuit, it will only be a matter of time to see a legal stance on DHS' pre-crime detector and what civil liberties might be compromised with this type of technology.

Sources

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[7] *Id.*

[8] http://lawandneuroscience.files.wordpress.com/2011/01/francis-x-shen-and-owen-d-jones-brain-scans-as-evidence.pdf

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