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System flawed, raises civil-liberty issues
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When any new surveillance technology is proposed, there are several questions that should be answered. First, what is the goal of implementation? Second, is the technology effective? Third, do the benefits of the technology outweigh the costs?

The goal of using face-recognition camera surveillance systems in Nashville schools is "providing safety for our students and teachers," Ralph Thompson, assistant superintendent for student services, told *USA Today* last month. His hope is that the face-recognition surveillance systems will pluck undesirables out of school crowds.

Error rate is high

To answer the question of whether this goal can be achieved, we must first look at the technology. Face-recognition systems use computer algorithms to automatically detect and identify human faces.

First, the system must recognize a human face and extract it from the scene, such as a crowd in front of a school or a line at a lunch counter. Next, the system measures key points on the face, such as the distance between the eyes, the shape of the cheekbones and other distinguishing features. Finally, these images are compared with images in a database to find a match. The technology is complex and the error rate is high.

Face-recognition systems have failed numerous real-world tests at airports in Dallas-Fort Worth, Fresno, and Palm Beach County, Calif. One glaring example of the technology's weakness occurred when two people swapped passports at an Australian airport as a joke, and facial recognition systems didn't catch their deception. The city of Tampa, Fla., stopped using its face-recognition system because of its failures. "It's just proven not to have any benefit to us," a police spokesman told *The Tampa Tribune*.

Federal government tests have shown that face-recognition systems perform poorly with changes in the environment, such as positioning or lighting of the face, or when subjects act uncooperatively by angling or hiding their faces. We

can hardly hope all criminals or hooligans will patiently stand directly in front of a camera in perfect lighting conditions so that they can be matched with a computer database. However, these are the conditions necessary for these systems to work effectively.

System cost-prohibitive

Also, these surveillance systems are expensive. News reports state that each system will cost about $33,000. Every dollar spent on these systems is a dollar not spent on other, proven forms of school security, such as guards who can respond when problems occur.

Based on the above evidence, the answer to the third question is "no," the benefits of this surveillance technology do not outweigh the costs. Face-recognition technology is unreliable and there are significant financial and civil liberties costs. The only possible benefit would be an appearance of security, which is itself a cost. If students and teachers have a false sense of security, then they will be less vigilant in ensuring their own safety.

A final question needs to be considered: Do we want to create generations of Americans who accept constant surveillance of their daily lives, though they have done nothing wrong?

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