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## COMMENTARY

### The Consolations of Technology

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In the 19th century, scientists established a link between the morphology of the skull and the workings of the human mind. The Austrian physician Franz Joseph Gall (1758-1828) was one of the first to consider the brain as the home of all mental activities. Freud, Darwin and modern medicine have subsequently elaborated on this proposition.

In the 21st century, brain-imaging technology and biometrics have renewed the promise of ascertaining human propensities and even predicting behavior.

Brain imaging purports to show differences between groups of people. *The New York Times* reported on Oct. 11 that a technique called magnetoencephalography showed differences between bilingual and monolingual babies.

Neuroscientists have used MRI to show that music activates regions called the “nucleus accumbens” and “ventral tegmental area” to release dopamine, a chemical that triggers the brain’s sense of reward.

Take any two people and compare their brainwave activity. It is powerfully alluring to think that the differences you measure — different levels of activity or different regions of the brain — must reveal the differences

between the people being compared.

Different levels of activity in the insular cortex? Must be the difference between risk-takers and sociopaths, conservatives and liberals, between men and women.

Given the faith we place in technology, it seems inevitable we will hear a proposal to measure and compare the brain waves of terrorists against the model population. Why not ask people to submit to brain imagery before boarding airplanes?

Gall’s discipline contained great insights, though his phrenology was eventually debunked. Brain imaging similarly holds value, but scientists are still exploring what the images mean. This doesn’t stop the imagination from investing the technology with powers above and beyond what it can actually accomplish.

The Department of Homeland Security is testing a controversial program designed to predict whether a person will commit a crime. Its Future Attribute Screening Technology (FAST) project will collect and retain a mix of “physiological and behavioral signals” from individuals as they engage in daily activities.

DHS says it will “detect cues indicative of mal-intent (the intent or desire to cause harm) rapidly, reliably, and remotely. The system will measure both physiological and behavioral signals to make probabilistic assessments of mal-intent based on sensor outputs and advanced fusion algorithms and

measure indicators using culturally neutral and non-invasive sensors.”

In other words, DHS seeks to determine the probability that an individual, not suspected of a crime, might commit a future criminal act. According to a 2008 Privacy Impact Assessment prepared by the agency, the DHS intends to monitor and collect data including “video images, audio recordings, cardiovascular signals, pheromones, electrodermal activity, and respiratory measurements.”

It is designed to track and monitor, among other things, body movements, voice-pitch changes, prosody changes (alterations in the rhythm and intonation of speech), eye movements, body heat changes and breathing patterns. Occupation and age are also considered.

The principle of limited government power, a fundamental predicate of U.S. constitutional law, gets eclipsed in this scenario. But it need not be so. Several U.S. privacy laws constrain the government’s use of private information.

The Computer Fraud and Abuse Act, the Wire and Electronic Communications Interception and Interception of Oral Communications Act, the Video Privacy Protection Act, and the subscriber privacy provisions in the Cable Act — these statutes limit the information that can be extracted from citizens. They provide that the information must be gathered in a legal manner, and establish parameters for openness and accountability.

Initiatives that would require disclosure of information for the purpose of detecting, investigating, prosecuting or preventing criminal offenses should

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be adopted only in limited cases.

It must be certain that the information is provided within the context of a legal framework that ensures accountability and prevents the use of informa-

tion in other contexts that may violate the privacy rights of individuals.

The government has to be able to exercise its police powers. But unless it can demonstrate that it has a criminal

predicate, evidenced by a court order or a grand jury subpoena, a government of limited powers should not get easy access to sensitive or private information about individuals. ■