



**Homeland
Security**

September 17, 2013

Stephen M. Lord
Director, Homeland Security and Justice Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Draft Report GAO-13-259, "AVIATION SECURITY: TSA Should Limit Future Funding for Behavior Detection Activities"

Dear Mr. Lord:

Thank you for the opportunity to review and comment on this draft report. The U.S. Department of Homeland Security (DHS) appreciates the U.S. Government Accountability Office's (GAO's) work in planning and conducting its review and issuing this report.

The Transportation Security Administration's (TSA's) Screening of Passengers by Observation Techniques (SPOT) program was developed to provide a non-invasive behavior detection technique, using an objective process, to identify potentially high-risk individuals. The program provides a critical security capability to defend against our adversaries, and it enhances the passenger experience by enabling expedited risk-based passenger screening to take place.

Behavior detection is a vital component of TSA's multi-layered risk-based intelligence-driven security program. TSA's overall security program is composed of interrelated parts, all dedicated to ensuring the safety and security of the traveling public. TSA has already established an effort partnered with the DHS Science and Technology Directorate (S&T), academic, industry and other government and community stakeholders to enhance behavior detection and provide the tools to better quantify its effective contribution to security. Ongoing progress demonstrates TSA's commitment to its mission of securing our Nation's transportation systems.

SPOT Validation Study

TSA believes that to fully appreciate GAO's report, the specific findings within the 2011 SPOT Validation Study must be examined within the context of behavior detection's role and the operational environment. Terrorists continue to pose a significant, persistent, and evolving threat to aviation security, demonstrating their ability to adapt and innovate to overcome security obstacles. Behavior detection techniques have been an accepted practice for many years within the law enforcement, customs and border enforcement, defense, and security communities both in the United States and internationally.

As concluded in a recent RAND National Defense Research Institute report, “[T]here is current value and unrealized potential for using behavioral indicators as part of a system to detect attacks.”¹ TSA behavior detection procedures, including observational assessments and the equally important verbal interaction with passengers, are an essential element in a dynamic, risk-based layered security system.

As acknowledged in GAO’s draft report, the 2011 SPOT Validation Study contained data that were useful in understanding behavior detection in its current form. However, the study and GAO analyzed the data using different statistical techniques and arrived at separate conclusions. TSA program officials and subject matter experts believe the techniques used by GAO introduced error into its analysis of indicator associations, thereby producing results that were misleading. The limitations documented in the study noted by GAO do not sufficiently bias the study’s results or negate its conclusion. TSA officials and the independent Technical Advisory Committee² agree with the study’s conclusion: SPOT is substantially better at identifying high-risk passengers than a random screening protocol.

TSA appreciates GAO’s specific comments on the attributes of the behavior indicator set, and agrees that opportunity for improvement exists. TSA has already initiated new efforts aimed at improving behavior detection and the methodologies used to evaluate it. TSA’s multi-year project currently underway aims to:

- Optimize the behavior indicator list used by condensing and strengthening the indicators to a more manageable list. This will involve providing scientifically based rationale for the indicators included as well as optimizing the weights and protocols used. This is commonly referred to as *Optimization* and will most likely result in significant changes to the SPOT procedures.
- Investigate various performance metrics that could be used to examine effectiveness on several levels (e.g., overall program effectiveness, individual and combinations of indicator effectiveness, and reliability across individuals and locations.) This effort will complement the TSA 2012 Behavior Detection Performance Metrics Plan.
- Examine whether disparity exists on a systematic level as well as on an individual basis.
- Update training and protocols as necessary to achieve a consistent application of behavior detection as well as investigate other potential applications suited for an operational environment.

¹ Davis, P. K., Perry, W. L., Brown, R.A., Yeung, D, Roshan, P., and Voorhies, P. (2013). “Using Behavioral Indicators to Help Detect Potential Violent Acts: A Review of the Science Base”. RAND Corporation, National Defense Research Institute.

² DHS convened the Technical Advisory Committee (TAC), composed of researchers and law enforcement professionals reflecting a diverse set of academic and applied backgrounds, to provide an independent review of the Validation Study methodology.

- Incorporate more robust data collection and authentication protocols similar to those used in TSA operational tests of screening technologies.

Research Literature

TSA officials also believe that the deception research cited by GAO does not consider all the research available, and those research projects that are cited lack ecological and external validity – the extent to which behavior in one environment is characteristic of a second – necessary to relate the findings to security environments in which the stakes are high and where security professionals are concerned with individuals who pose a threat and who intend to cause harm. S&T has conducted its own research as it relates to imminent threats and used internal Government-sponsored studies in support of behavior detection development. However, these studies are not typically published in academic circles for peer review because of various security concerns and therefore are often not included in literature reviews. The academic literature cited by GAO provides a wealth of information regarding a person’s ability to judge whether someone has lied and about topics that do not require a great deal of motivation or consequences, which affect the behavioral responses and are therefore not relatable to TSA’s operational context.

The purpose of SPOT is not to solely detect individuals who are lying, for example, proffering falsehoods, as is commonly referred to in the academic literature cited in the GAO report. The majority of the research cited by GAO is focused on low-stakes lying, using mostly laboratory settings for empirical evaluations. Conversely, SPOT uses a broader array of indicators, including stress and fear detection as they relate to high-stakes situations where the consequences are great, for example, suicide attack missions. Behavior detection methods employed by TSA use indicators to identify individuals who exhibit higher, or stronger than normal, (i.e., above a baseline; anomalous) degrees of behavior, both verbal and non-verbal. A 2008 report by the National Research Council (NRC) found scientific evidence that supports this method. Specifically, the NRC states that, “scientific support for linkages between behavioral indicators and physiological markers and mental states is strongest for elementary states, such as simple emotions; weak for more complex states, such as deception, and nonexistent for highly complex states...”³

The goal of the TSA behavior detection program is to identify individuals exhibiting behavior indicative of simple emotions (e.g., fear, stress) and re-route them to a higher level of screening. TSA’s behavior detection approach does not attempt to specifically identify persons engaging in lying or terrorist acts; rather, it is designed to identify individuals who may be high-risk on the basis of an objective process using behavioral indicators and thresholds and routing them to additional security screening. In addition, GAO’s assessment and subsequent report included only non-verbal indicators, although verbal cues are a main category for behavior detection as employed by TSA.

³National Research Council (2008). “Protecting Individual Privacy in the Struggle Against Terrorists: A Framework for Assessment”. National Academies Press, Washington, DC.

A large part of Behavior Detection Officers' (BDOs') work is interacting with passengers and observing for these verbal cues as a way to assess whether passengers' statements match their behavior, or if their circumstances fit. It is misleading to state that the research is unresponsive of behavior detection when the entire process was not considered during the audit (i.e., GAO did not include research related to verbal indicators of deception).

Racial Profiling

TSA has a zero tolerance policy regarding unlawful racial profiling. This policy was reinforced and reiterated following allegations of racial profiling at Boston Logan International Airport (BOS) in August 2012. As recognized by GAO, TSA has taken several steps to enhance BDO awareness, including additional training of BDOs and initiation of a feasibility study to determine whether data on race and national origin (also religious garb) of passengers can be collected and analyzed. Also, the Secretary of Homeland Security issued an updated memo to all DHS Component heads stating that racial and ethnic profiling is prohibited under Department policy, except in exceptional circumstances.

BDOs are given instruction during their initial SPOT Basic training, and must also take a course specific to preventing racial, ethnic, and religious profiling. BDOs are instructed that, other than in exceptional circumstances as outlined under Department of Justice guidelines, racial profiling is unlawful and contrary to DHS and agency policy, and to immediately notify management if there is a belief that profiling is occurring. That instruction is reinforced during recurring training, in shift briefs, in employee counseling sessions, and other avenues. Additionally, all TSA employees take annual training on The Notification and Federal Employee Anti-discrimination and Retaliation Act of 2002 (No FEAR Act) that provides information to employees regarding rights and protections available under federal antidiscrimination, whistleblower protection, and retaliation laws. TSA expects every member of the workforce, including BDOs, to report allegations of profiling to local management or directly to the TSA Office of Civil Rights and Liberties, Ombudsman and Traveler Engagement (CRL/OTE) or Office of Inspection (OOI) without fear of retaliation.

When allegations do arise, TSA takes immediate steps to investigate the issue. TSA's OOI is the lead investigative unit for TSA. Most recently, the DHS Office of Inspector General completed an investigation at the request of TSA into allegations that surfaced at BOS and concluded that these allegations could not be substantiated. CRL/OTE is actively engaged with most communities concerned with profiling in part to ensure transparency.

The draft report contained one recommendation, with which the Department non-concurs. Specifically, GAO recommended that the Secretary of Homeland Security direct the TSA Administrator to:

Recommendation: Limit future funding support for the agency's behavior detection activities until TSA can provide scientifically-validated evidence that demonstrates that behavioral indicators can be used to identify passengers who may pose a threat to aviation security.

Response: Non-Concur. Significantly limiting funding would have a detrimental impact on TSA's goal of expedited risk-based passenger screening. The majority of the behavior detection funding, over 97 percent, is for payroll, compensation, and benefits and a reduction in funding would result in a reduction in the BDO workforce. SPOT is one component of TSA's multi-layered risk-based intelligence-driven security program. Because TSA's overall security program is composed of interrelated parts, to disrupt one piece of the multi-layered approach may have an adverse impact on other pieces, thereby adversely affecting TSA's overall security initiatives.

The Behavior Detection Program should continue to be funded at current levels to allow BDOs to screen passengers while the *Optimization* process proceeds. TSA anticipates making improvements to the indicator list and its use. Once the optimized behavior detection procedures are evaluated for security effectiveness and efficiencies, TSA will be able to refine the resource allocation model, as appropriate.

TSA anticipates the optimized behavior detection procedures to begin testing by the third quarter of Fiscal Year 2014, using robust test and evaluation methods similar to the operational testing conducted in support of technology acquisitions. TSA should have sufficient information on the performance of the new processes to update the national behavior detection employment strategy within 6 months of the commencement of the tests. Estimated Completion Date: December 31, 2014.

Again, thank you for the opportunity to review and provide comment on this draft report. Technical comments were previously provided under separate cover. Please feel free to contact me if you have any questions. We look forward to working with you in the future.

Sincerely,



Jim H. Crumpacker
Director
Departmental GAO-OIG Liaison Office