BAD TRIP

Debunking the TSA's 'Behavior Detection' Program

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Materials in TSA's Own Files Discredit Its Behavior Detection Program

Introduction

Documents obtained by the ACLU through a Freedom of Information Act lawsuit concerning the TSA's behavior detection program reinforce that the program utilizes unscientific techniques and creates an unacceptable risk of racial and religious profiling. Independent experts and government auditors have long criticized the behavior detection program as flawed and wasteful—the program cost at least $1.5 billion through 2015. The TSA's own documents and materials in its files now vindicate those criticisms.

The documents show the evolution of the behavior detection program and make clear the extent to which it is a program of surveillance of unsuspecting travelers based on unreliable indicators. "Behavior detection officers," some of them dressed in plain clothes, scrutinize travelers at airports for over 90 behaviors that the TSA associates with stress, fear, or deception, looking for what the TSA calls signs of "mal-intent." The reliability of these so-called indicators is not supported by the scientific studies in the TSA files. The behavior detection officers may then engage travelers in "casual conversation" that is actually an effort to probe the basis for any purported signs of deception. When the officers think they perceive those behaviors, they follow the travelers, subject them to additional screening, and at times bring in law enforcement officers who can investigate them further.

The TSA has repeatedly claimed that the behavior detection program is grounded in valid science, but the records that the ACLU obtained show that the TSA has in its possession a significant body of research that contradicts those claims. The records include numerous academic studies and articles that directly undermine the premise of the program: the notion that TSA officers can identify threats to aviation security with some reliability based on specific behaviors in an airport setting. In fact, the scientific literature in the TSA's own files reinforces that deception detection is inherently unreliable, and that many of the behaviors the TSA is apparently relying on are actually useless in detecting deception. The documents further show that the TSA either overstated the scientific validity of behavior detection techniques in communications with members of Congress and government auditors, or did not disclose information that discredited the program's scientific validity.

The documents also include materials that range from culturally insensitive to racially and religiously biased and sexist. We do not know whether and to what extent the TSA relied on some of these materials in implementing its behavior detection program, but the materials do not provide credible support for its validity.

Finally, previously undisclosed internal investigative materials shed more light on, and substantiate already public allegations of, racial and religious profiling by behavior detection officers at specific airports—Newark, Miami, Chicago, and Honolulu.

The TSA should—indeed, must—screen passengers for weapons or other items that could threaten aviation security, but documents in its own files make clear that its behavior detection program does not

further that mission. Congress should discontinue funding the TSA's behavior detection program, and the TSA should implement a rigorous anti-discrimination training program for its workforce.

Background

The TSA began implementing its behavior detection program, which was originally called Screening Passengers by Observation Techniques, or "SPOT," in 2007. The program's annual budget is roughly $250 million, and the cost of the program to taxpayers from 2007 to 2015 was at least $1.5 billion.[1]

The ACLU has long been critical of the program.[2] Numerous knowledgeable observers—government auditors, members of Congress from both parties, independent experts—have expressed serious concerns that the program lacks a grounding in science.[3] The TSA has produced no evidence that deception or "mal-intent" can reliably be detected through observation, especially through fleeting encounters in an unstructured setting like an airport screening area. This evidence is necessary in light of the substantial scientific evidence that human perception of others' behavior is inherently subjective and can be skewed by explicit and implicit bias.

It is perhaps unsurprising that the behavior detection program has given rise to persistent allegations of racial and religious profiling.[4] Such biased profiling allegations have come not only from travelers, but also from behavior detection officers themselves.[5] One former officer said the TSA's behavior detection program is a "license to harass," and another labeled it "a racial profiling program."[6]

The TSA's list of behavioral indicators—long held secret but leaked to the press in March 2015—deepens our concerns about the program and calls into question whether it could ever be implemented neutrally and objectively.[7] The list includes conduct as commonplace as being late for a flight, yawning, whistling, or rubbing one's hands together. Other "indicators" are unavoidably subjective: appearing confused, "wearing improper attire," "appearing not to understand questions," or displaying "exaggerated emotions."

In some cases, the TSA indicators place travelers in the difficult position of seeming deceptive to the TSA no matter what they do—whether they "give[] non-answers" to questions or they are "overly specific with answers"; whether they are "gazing down" or "constantly looking at other travelers or associates"; whether they have "no or little direct eye contact" or they have "widely open staring eyes." A news release about a report by the New York University Center for Human Rights and Global Justice that is included in the TSA's files makes this very point, calling behavioral indicators "contradictory and inconsistent." As a result, the release notes, "[t]he lack of real guidance leaves officers to rely on their own assumptions and stereotypes on whom to treat as suspect."[8]

FOIA Lawsuit

Despite near-universal criticism of the behavior detection program and persistent allegations of unlawful profiling, the TSA has continued to maintain that the program is effective and based on valid science and techniques. The ACLU filed a Freedom of Information Act request in October 2014 for records related to the program, including:

- Any scientific data or research that would support the use of behavior detection;
- Policies and guidance governing the program;
- The extent to which the program disproportionately impacts minorities.[9]

When the TSA failed to respond to the FOIA request, the ACLU and the New York Civil Liberties Union filed a lawsuit in March 2015 demanding that the TSA produce the records.[10] The TSA began doing so in June 2015 and ultimately produced over 13,000 pages of documents.

Key Findings

The documents that the TSA produced as a result of the ACLU's FOIA lawsuit reveal numerous aspects of the behavior detection program that were not previously public. This paper describes the new information produced to the ACLU, and reviews that material in the context of publicly available information about the TSA's behavior detection program. It describes key findings and makes recommendations based on these findings.

1. **The TSA expanded the scope of the behavior detection program and its use of surveillance techniques.**

The TSA's documents offer perspective on the evolution of the behavior detection program, and they suggest that the program has become more expansive, covert, and intrusive over time. For instance, in 2009, the TSA expanded the program beyond security checkpoints at airports, so that behavior detection officers were "spread throughout the entire airport as well as across the entire multi-modal transportation sector."[11] Similarly, since at least 2009, the TSA has deployed behavior detection officers in plain clothes to conduct surveillance covertly in coordination with uniformed officers who perform any resulting screening.[12] It is unclear how often the more than 3,000 behavior detection officers the TSA deploys today conduct "plain clothes operations," and the materials that the TSA produced only hint at the procedures that govern them.[13] But it is clear that roving teams of behavior detection officers— some of them undercover—surveil and track passengers throughout airports, even after the passengers have cleared security.[14]

Behavior detection officers' use of "casual conversation" with travelers they deem suspicious also raises questions about the methods and consequences of the behavior detection program. In training materials, the TSA defines "casual conversation" as "a SPOT-specific technique using a voluntary, informal interview conducted by a BDO [Behavior Detection Officer] to attempt to resolve observed anomalous behavior."[15] But these "casual conversations" are anything but casual. Behavior detection officers undergo training on the technique, which is intended to help the officers build "rapport" with the travelers they are questioning, gain the travelers' cooperation, and elicit information from them.[16] While doing so, the officers are trained to scrutinize the travelers closely for signs of deception.[17] These interactions are therefore less like "conversation" than stealth interrogation:[18]

SECTION A: PROGRAM OFFICE TALKING POINTS

How do you start your Casual Conversation?

When conducting Casual Conversation (CC), the interaction with the passenger should appear natural. The passenger should not suspect that they have undergone any deliberate line of questioning. (b)(3):49 U.S.C. § 114(r)

The TSA's use of this technique is troubling for several reasons. First, in searching for deception in the traveling public, the TSA is being deceptive itself. Behavior detection officers are attempting to mislead passengers into thinking they are having a casual conversation, when in fact they are suspected of having some sort of "mal-intent." Most travelers are unlikely to know that the officers are probing for personal information.

It is difficult to see how such "conversations" are always voluntary. A 2009 internal analysis of the SPOT program by the Department of Homeland Security's Office of Civil Rights and Civil Liberties states that this kind of questioning is permissible because it is "entirely optional," and "travelers may decline to engage in conversation with the BDOs." But the same analysis notes that TSA policy prohibits travelers from leaving once they have entered a security screening checkpoint. That reinforces our concern that travelers will assume that they may not simply ignore the officers, or that they would risk additional screening for doing so.[19]

That risk is not merely speculative. The leaked list of the TSA's "indicators" shows how avoiding or minimizing conta ct with behavior detection officers can be construed as an indicator itself.[20] According to the list, "gives non-answers," "lacking details about purpose of trip," and "downplaying of significant facts when answering questions" are all "signs of deception." Indeed, TSA records related to passenger complaints show that behavior detection officers have cited those very indicators in explaining why they referred passengers who refused to engage them for additional screening.[21] In one example in Minneapolis, a traveler made clear that he did not want to talk to the officer, but the officer persisted in attempting to make conversation and then referred the traveler for additional screening because the traveler "appeared to be deliberately evading my questions."[22]

The TSA's Multicultural Branch did the right thing by evaluating such complaints and working to address the passengers' concerns.[23] But the manager of the Multicultural Branch also acknowledged in a 2014 memorandum that referring travelers for additional screening based on their refusal to engage in conversation has been a recurrent issue and raises constitutional concerns; as the manager wrote, "Travelers have a constitutional right to not speak with a BDO."[24]

The TSA's mission is both important and difficult, and it stands to reason that the TSA urges its employees to be vigilant. The behavior detection program, however, goes beyond vigilance and uses surveillance to impose consequences on travelers. The most obvious such consequence is questioning and additional security screening, but the TSA's documents also suggest that the TSA communicates directly with air carriers about some passengers after screening them, and that the carriers have then barred some of the passengers from boarding their flights:[25]

> **3.12.10 DENIED BOARDING BY CARRIER:** Select this field when the air carrier is notified of an individual who met the SPOT threshold and denies them access to their scheduled flight. This may apply regardless of the individual's allowance into the sterile area. (b)(3):49
>
> (b)(3):49 U.S.C. § 114(r)

The documents that the TSA produced include little else on such boarding denials. To the extent that the TSA is prompting air carriers to bar certain passengers from boarding their flights based on behavior detection techniques, that would raise constitutional issues, because—as explained further below—by using those techniques, the TSA may be restricting people's liberty on spurious grounds or relying on race or religion in doing so.

2. Academic research and other documents in the TSA's own files reinforce that behavior detection is unscientific and unreliable.

The TSA has maintained its behavior detection program despite [widespread criticism](#) of the program from experts and outside observers.[26] But academic studies and other materials in the TSA's own files underscore that it is neither scientifically valid nor workable in practice. It does not appear that the TSA has incorporated these critical perspectives in its behavior detection program—or in its public statements about the program.

Academic literature. Documents in the TSA's files include numerous academic or scientific studies related to behavioral signs of deception or the detection of deception by humans. That literature does not support the use of behavior detection in transportation screening. Indeed, much of it directly undercuts the premise of the TSA's behavior detection program: that people can detect deception or "mal-intent" in others with some reliability. The studies in the TSA's files, in fact, [broadly reject](#) that premise:[27]

> Four decades of deception research in which more than 100 studies have been published have revealed one major finding. The mere fact that someone lies will not affect his behavior, voice or speech, and therefore typical deceptive responses such as 'Pinocchio's growing nose' do not exist (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, and Cooper 2003; Vrij 2000).

The general inability to detect deception in others has remained remarkably durable across studies and variables, as the materials in TSA's files attest. For instance, the files include a meta-analysis of deception-detection studies by psychologists Charles Bond and Bella DePaulo that was published in *Personality and Social Psychology Review* in 2006. The authors concluded that "[d]espite decades of research effort to maximize the accuracy of deception judgments, [detection rates rarely budge](#). Professionals' judgments, interactants' judgments, judgments of high-stakes lies, judgments of unsanctioned lies, judgments made by long-term acquaintances—all reveal detection rates within a few points of 50%," or the rough equivalent of flipping a coin.[28]

Other research in the TSA's files underscores this finding:

- Contributors to a 2004 edited volume titled *The Detection of Deception in Forensic Contexts* concluded that "people in general are not skilled in distinguishing between truthful and deceptive behaviour."[29]
- Study findings published in 2007 in *Law and Human Behavior* showed that overall lie detection rates "were low and did not differ from the level of chance." The authors wrote that "[t]his study, like so many previous studies . . . shows the difficulty police officers face when discerning truths from lies by observing the suspect's verbal and nonverbal behaviours."[30]
- A meta-analysis published in 2011 in *Psychological Bulletin* found that "one of the major findings" of social psychological research on deception detection is that "people are poor at detecting lies."[31]

Thus, instead of validating the TSA's behavior detection program, the academic research in the TSA's files reinforces the already-public conclusions of government auditors and independent experts that the program lacks scientific support:

- In a 2010 report, the Government Accountability Office (GAO) found that the "TSA deployed SPOT nationwide without first validating the scientific basis for identifying suspicious passengers in an airport environment."[32]
- A 2014 follow-up report by the GAO stated that "[p]eer-reviewed, published research does not support whether the use of nonverbal behavioral indicators by human observers can accurately identify deception."[33]
- The latter GAO report cited a 2008 study performed for the Department of Defense by the JASON Program Office, an independent scientific advisory group, that found that "no compelling evidence exists to support remote observation of physiological signals that may indicate fear or nervousness in an operational scenario by human observers, and no scientific evidence exists to support the use of these signals in detecting or inferring future behavior or intent."[34]

One of the principal concerns these independent reviewers have raised about the TSA's behavior detection program is that perception of the indicators is inherently subjective. For instance, the GAO emphasized in its 2014 report that "subjective interpretation of behavioral indicators and variation in referral rates" between airports and individual behavior detection officers "raise[] questions about the use of behavioral indicators to identify potential threats to aviation."[35] Documents in the TSA files related to internal investigations of alleged misconduct by behavior detection officers appear to bear out such concerns. Those files recount numerous instances in which officers "were assigning behaviors where no such behavior existed or it was inflated by the reporting BDO"—a troubling sign of the subjectivity of the indicators and the discretion behavior detection officers wield in "observing" them.[36]

Even where academic articles in the TSA's files posit certain behavioral cues to deception, the cues are often so vague and subjective as to be inappropriate for use in a transportation security setting. A passage in a 2004 academic article on deception detection in the journal *Group Decision and Negotiation*, highlighted by TSA personnel, provides an example:[37]

> Moreover, compared to truth tellers, liars tend to sound vocally *less expressive, more passive, more uncertain* and *less involved* (which might be the result of an overcontrol of behavior) and *more tense* (which might be the result of arousal). They also come across as being *less cooperative* and their faces appear *less pleasant*. Both might be caused by a negative emotion felt by the liar.

These "indicators" are not only subjective but also potentially counterproductive if used as a basis for training law enforcement or government officers. Numerous studies in the TSA's files found that people who are trained to look for these sorts of behaviors are *worse* at lie detection than people who are not trained at all.[38] In one report in the TSA's files, psychologists conducting research on potential behavioral and verbal cues to deception found in 2004 that police officers who think indicators such as gaze aversion and fidgeting are signs of deception "are the worst lie detectors."[39] Although some researchers theorize that professionals could be trained to detect lies in "high-stakes" situations, they concede that it is "premature" to say that observers can be trained to detect lies with any reliability, or that any success in detecting deception in research settings can be generalized to "the real world."[40]

Furthermore, studies included in the TSA's files found that those with greater motivation to detect lies or deception were less accurate but more confident in their assessments. One researcher writing in *Legal and Criminological Psychology* in 2010 called this "a dangerous combination resembling 'tunnel vision.'"[41] Aldert Vrij, a leading scholar of deception detection, wrote in his 2008 book *Detecting Lies and Deceit* that "high confidence in one's ability to catch liars can be harmful when the confidence is unjustified," in part because "high confidence often results in making quick decisions on the basis of limited information"—precisely what the TSA is attempting to do through its behavior detection program.[42]

The studies in the TSA's files include ample evidence showing why people who rely on these indicators do poorly in detecting deception: *the indicators are not reliably associated with deception*. One such study, by psychologists Maria Hartwig and Charles Bond, explained that "contrary to previous assumptions, people rarely rely on the wrong cues. Instead, limitations in lie detection accuracy are mainly attributable to weaknesses in behavioral cues to deception."[43]

In fact, academic findings from articles in the TSA's files directly undermine the validity of many of the indicators the TSA uses in its behavior detection program:[44]

- *Gaze aversion and nervous gestures*. Professor Vrij wrote in *Detecting Lies and Deceit* that "[b]oth laypersons and professional lie catchers overwhelmingly expect liars to react nervously, with 'liars look away' and 'liars make grooming gestures' amongst the most popular beliefs. Such cues are not reliable cues to deception."[45] In another article, Professor Vrij and Dr. Samantha Mann observed that "a striking finding of the literature is that liars do not seem to show clear patterns of nervous behaviors such as gaze aversion and fidgeting."[46] Nonetheless, according to the TSA's indicators, "[g]azing down," "excessive fidgeting, clock watching, head-turning, shuffling feet, leg shaking," "[n]o or little direct eye contact," and "[e]xaggerated, repetitive grooming gestures" are among the signs of deception, stress, or fear that behavior detection officers look for in travelers.[47]

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- *Facial behaviors*. In their meta-analysis published in *Personality and Social Psychology Review*, Bond and DePaulo found that "facial behaviors provide no indication of a speaker's veracity."[48] The TSA's indicators of deception, however, include "Exaggerated yawning," "Face becomes flushed," and "Whistling during the screening process."[49]
- *Eye blink rate*. Vrij and Mann found that study subjects "made fewer [eye] blinks when they lied," but "Fast eye blink rate" is among the TSA's indicators of deception.[50]
- *Placement of hands over the mouth*. Professor Vrij identified the belief "that liars place their hands over the mouth" as another "frequently mentioned," yet erroneous, indicator of deception.[51] But according to the TSA's leaked indicators, "Covers mouth with hand while speaking" is another "sign of deception."
- *Vagueness or evasiveness*. The notion that liars or guilty people tend to use vague or evasive terms, often voice complaints, or offer "qualified and well-rehearsed responses" are among commonly held beliefs for which the contributors to *The Detection of Deception in Forensic Contexts* found "there is simply no empirical support."[52] But again, the TSA's indicators of deception include "Evasive or vague responses," "Excessive complaints about the screening process," and "Well-rehearsed answers that may not respond to questions."
- *Vocal stress*. Researchers conducting a review of academic literature on stress patterns in the voice concluded that there are "few consistent findings as to the vocal effects of stress," and that "tremor modulation of the voice is not a reliable measure of lie, guilt, or stress."[53] The TSA's indicators of deception, however, include "Trembling of voice."

Scientific papers in the TSA's possession undermine the validity of behavior detection programs for additional reasons. For example, Professor Vrij emphasized that "nonverbal behavior is culturally mediated."[54] He cited various studies showing that "in interactions between non-Caucasian [speakers] and Caucasian observers . . . nonverbal behavior patterns that are typical for an ethnic group are easily interpreted by Caucasian observers as signs of deception."[55]

Similarly, the academic materials in the TSA's files explain how outward appearances play a significant, but invalid, role in assessments of deception. Professor Vrij cited research showing that perceptions of deception, including among lie-detection "professionals" such as police officers, are driven by superficial factors such as how well-dressed or attractive a person is—characteristics that "are not valid cues to deception."[56]

Another problem arises in connection with a person's motivation to be believed. In their 2006 meta-analysis, Bond and DePaulo wrote that "the accumulated evidence suggests that people who are motivated to be believed look deceptive whether or not they are lying."[57] That finding is significant, given that many travelers will likely be particularly motivated to be believed when accosted by behavior detection officers or redirected for secondary screening.

Other documents in the TSA's files underscore that physiological signs such as blushing, sweating, or trembling have numerous potential causes, including medical conditions. For instance, a National Institutes of Health article on common forms of tremor explained that determining the cause of tremor "can be very challenging" for clinicians. That is likely even more true for TSA officers with no clinical

expertise.[58] The fact that the TSA associates those signs with stress, fear, or deception increases the likelihood that officers will more intensively scrutinize travelers with medical conditions.

Finally, the studies in the TSA's own files reinforce that any limited success in detecting signs of deception in a laboratory or academic setting cannot be replicated in an unstructured airport context. Even assuming that any behavioral cues to deception exist, Professor Vrij explained that they likely are influenced by personality, culture, and situational factors.[59] For this additional reason, it appears highly unlikely that behavior detection officers could reliably assess deception or "mal-intent" through brief encounters with total strangers in a context as fluid and harried as an airport terminal.

The TSA's documents do include a study that the TSA commissioned in 2011 in an effort to validate its use of behavior detection techniques.[60] The entity that conducted the study — the American Institutes of Research—found evidence to support the validity of some of the TSA's behavioral indicators.[61] However, the Government Accountability Office conducted an exhaustive review of the study and concluded in a 2014 report that the study was based on a flawed methodology and unreliable data.[62] The GAO determined that "because the study used unreliable data, its conclusions regarding the use of the SPOT behavioral indicators for passenger screening are questionable and do not support the conclusion that they can or cannot be used to identify threats to aviation security."

In sum, documents produced as a result of the ACLU's FOIA lawsuit suggest that the TSA has persisted in maintaining a behavior detection program that the research and academic studies in its own files directly and conclusively undermine.

Press articles. In response to the ACLU's FOIA lawsuit, the TSA also produced scores of news articles related to suicide bombings that occurred mostly in Israel, but also in conflict zones in Iraq or Afghanistan. The articles do not constitute the kind of "scientific analyses, published or unpublished studies, literature, research, or operational best practices" that the ACLU requested regarding "whether behavior detection techniques can reliably be used to identify persons who may pose a risk to aviation security."[63] Rather, much of the reporting in the articles is unsubstantiated or reflects the views of individuals with questionable expertise in identifying suicide bombers. It is unclear why the TSA believes these press articles are responsive to the ACLU's FOIA request regarding behavior detection programs, but it is notable nonetheless.

We also do not know why the TSA keeps these press articles. To the extent the TSA does so in the belief that they show that individuals who have carried out suicide attacks tend to display certain signs beforehand, the accounts in the articles are at best anecdotal, and nothing in the TSA's documents suggests that "indicators" derived from these scenarios can reliably be used for the purpose of screening travelers at U.S. airports. Indeed, an article written by police officers and produced by the TSA makes a similar point: "lessons learned in foreign countries do not necessarily apply in the United States without extensive modification. The political, legal, and cultural environments in Israel . . . are far different from those of the United States. What works in Israel . . . often will not here."[64]

The press articles also relate only to suicide bombings carried out in the Middle East or Afghanistan. They do not include any articles related to other threats, sources, or regions, including the United

States. Again, we cannot be certain why the TSA possesses these articles or how it uses them, but this overwhelming focus reinforces the sense that the primary targets of the TSA's behavior detection programs are Muslims and individuals of Arab, Middle Eastern, or South Asian heritage.[65]

Even so, the press accounts in the TSA's files are often inconsistent. They suggest that some suicide bombers wore "unreasonable garb," while others had a "well-coiffed" appearance; some were sweating profusely, while others were "perfumed"; some exhibited anxiety or stress, while others displayed "unusually calm and detached behavior."[66] Those inconsistencies mirror the contradictions in the TSA's list of indicators, as discussed above. They also reinforce a conclusion on which terrorism researchers and experts broadly agree: no valid terrorist "profile" exists, nor are there reliable, observable "indicators" that can be used to identify people who might engage in terrorist or other violence.[67]

In short, the press articles in the TSA's production do not advance its case for using behavior detection techniques in airport screening.

Other materials. The TSA's records also include presentations or reports on suicide bombings or terrorism-related issues that are of questionable relevance and credibility. The authors of these documents make generalized statements about suicide bombers and recycle, often verbatim, the "indicators" or behaviors supposedly associated with suicide bombers without referring to or utilizing any data, and without identifying credible sources. The focus is almost entirely on one threat scenario and primarily on Muslims—heightening our concerns about whether the TSA has adopted that focus.

Even these documents acknowledge that no valid profile exists for terrorists or suicide bombers.[68] Despite—or perhaps because of—this lack of a profile, the "indicators" of potential terrorist violence that these materials posit are so subjective and vague as to be useless:[69]

A presentation prepared by the New York Fire Department on explosive devices includes similarly subjective or ambiguous behavior:[70]

Suspicious Behavior

- Walking slowly while glancing right and left
- Running in a suspicious manner
- Repeated attempts to steer clear of security
- Repeated nervous feeling for something under clothing
- Nervous, hesitant
- Drug-induced state
  - (given drugs to calm down)

Other materials suggest "signs" of a suicide bomber that are hopelessly common (sweating, fidgeting) or tinged with racial or ethnic bias (disguise "to look more European").[71] In the same vein, a Department of Homeland Security/FBI bulletin combines the subjective and unremarkable—"Eyes appear to be focused and vigilant"; "Suspect is walking with deliberation but not running"—with "indicators" that are unhelpful in an airport setting: "Suspect may be carrying heavy luggage, bag or wearing a backpack."[72]

The materials also raise questions about the origin and validity of lists of purported suicide bomber "indicators." Various documents in the TSA's files repeat a list of such indicators. A U.S. Marine Corps security reference card provides an example:[73]

6.0   Indicative behaviors of suicide bombers

A. Clothing is out of sync with the weather.
B. Clothing is loose. Clothing gives impression that body is disproportionately larger than head or feet.
C. Suspect may be carrying heavy luggage, bag or wearing a backpack.
D. Pale face from recent shaving of beard.
E. Eyes appear to be focused and vigilant.
F. No response to authoritative voice commands or direct salutations from a distance.
G. Behavior is consistent with no future, e.g. individual purchases a one-way ticket or is unconcerned about receipts for purchases or, or receiving change.
H. Suspect is walking with deliberation but not running.

The FBI includes a similar list on its Terrorism Quick Reference Card, as do other organizations and entities.[74] Despite the repetition of that list, the documents in the TSA's files do not indicate where the list originated or whether it is empirically valid. Indeed, a panel of "subject matter experts" that the TSA convened in 2013 to assess literature on "Pre-Incident Indicators of Suicide Attack" identified this very problem as a limitation on the panel's ability to validate the TSA's own set of indicators:

> [T]he similarity [of pre-incident indicators] across these sources should be viewed with caution because it is difficult to determine the extent to which these lists were independently derived. Without this information, it is not possible to gather corroborating information about the credibility of the listed indicators as markers of suicide attackers.[75]

Thus, the panel had difficulty substantiating the indicators because it could not determine their origin—further suggesting that the "indicators" the TSA uses in its behavior detection program lack a scientific basis.

Ultimately, the thousands of pages of articles, studies, and other materials that the TSA produced do not demonstrate that its behavior detection program rests on valid science. Instead, they cast serious doubt on whether the program can be implemented reliably, effectively, and without bias.

3. **The TSA repeatedly overstated the scientific validity of behavior detection in communications with members of Congress and the Government Accountability Office.**

Various documents in the TSA's production show that statements the TSA or its employees made to members of Congress and others exercising oversight roles regarding the behavior detection program are at odds with documents in the TSA's own files.

- In a congressionally mandated Fiscal Year 2010 report to Congress on the SPOT program, the TSA stated that "[l]aw enforcement, security agencies, and academia have acknowledged for decades that all individuals, no matter their race, gender, age, or religion, may exhibit particular behaviors when in situations of stress, fear and/or deception."[76] That statement suggests that such behaviors are universal and that some sort of consensus exists regarding the extent to which they reflect deception.

  As explained above, however, the empirical research and academic literature that the TSA produced in response to the ACLU's FOIA request directly contradict both of those claims. That raises two possibilities: If the TSA had those materials in its files at the time of the 2010 report to Congress, its statement was deeply misleading. If the TSA did not yet possess those materials, it lacked a basis for making the statement.

- The 2010 report to Congress went on to state that "[e]ach of the behaviors the TSA Behavior Detection Officers are trained to observe is garnered from both the scientific and law enforcement community."[77] Again, either the TSA lacked a basis for that statement or it ignored the near-consensus conclusion set forth in the research in its files that behavioral cues to deception are weak or nonexistent, along with the findings outlined above directly undermining specific indicators that the TSA associates with deception or "mal-intent."

- The same report to Congress stated that the TSA's behavior detection program "[h]elps minimize or prevent screener subject-based assessments of risk that could be based on flawed assumptions or racial/ethnic bias, by utilizing *objective* criteria that ensure uniform and unbiased results and that must be documented" (emphasis in original).[78] That claim was remarkable in two respects: first, it acknowledged that subjective criteria could easily serve as the basis for unlawful profiling, and second, it ignored that many of the TSA's indicators are inherently subjective.[79]

- The TSA's documents show that Representative Paul Broun, then Chairman of the House Subcommittee on Investigations and Oversight, requested testimony in March 2011 from the TSA regarding the efforts, processes, and methodologies used to develop and validate the indicators used in the program.[80] The TSA's response was that "the program was established on widely accepted principles supported by leading experts in the field of behavioral science and law enforcement."[81] That statement did not acknowledge the significant body of scientific research that is at odds with the unstructured use of behavior detection in security screening, and the evidence undermining the validity of specific indicators, as detailed above.

- In other responses to Representatives Bennie Thompson, Cedric Richmond, Elijah Cummings, and John Conyers regarding the deficiencies that the Government Accountability Office described in its November 2013 report, TSA Administrator John Pistole stated, "There is a significant body of research that was not referenced in the GAO report that provides a basis for the use of behavior detection protocols."[82] But the documents that the TSA produced to the ACLU do not indicate that such a body of research exists in the TSA's files.

- In an April 2010 letter to Stephen Lord, the Director of Homeland Security and Justice Issues at the GAO, Jerry Levine of the DHS GAO Liaison Office stated that the "TSA carefully developed SPOT by using selective behaviors recognized within both the scientific and law enforcement communities as displaying stress, fear, and deception. . . . Decades of scientific research have shown the behaviors to be universal in their manifestation."[83] Yet again, that statement is directly at odds with the academic and research material that the TSA has now produced regarding the validity of such behavioral indicators as a tool for detecting deception.

We do not know whether the TSA misinterpreted or misrepresented the material in its own files, but these statements to lawmakers and officials charged with oversight of the TSA's programs are troubling, and they further undermine the legitimacy of the TSA's behavior detection program.

4. Materials in the TSA's files raise further questions about anti-Muslim bias and the origins and focus of the TSA's behavior detection program.

Various documents and materials in the TSA's files reflect a disproportionate focus on, and in some cases overt bias against, Arabs, Muslims, and those of Middle Eastern or South Asian descent. It is unclear whether and to what extent these materials influenced the design or implementation of the TSA's behavior detection program. However, documents the TSA produced show that until late 2012, training materials for behavior detection officers focused exclusively on examples of Arab or Muslim terrorists. In an October 2012 memorandum to the Secretary of Homeland Security, TSA Administrator Pistole wrote as follows regarding revelations of racial profiling at Boston Logan International Airport:[84]

3. The Assessor training will stress the importance of racial, ethnic, and religious neutrality. Training documents will state the anti-discrimination point clearly wherever relevant, and also will demonstrate its importance by avoiding the current exclusive focus on examples on Arab/Muslim terrorists. Training materials will emphasize that lack of English proficiency, in and of itself, is not a suspicious indicator.

The fact that the TSA had failed to address this clear racial and religious bias in its behavior detection training materials until late 2012 is problematic, and it raises questions about whether the TSA has implemented effective safeguards against impermissible profiling of travelers who are Arab, Muslim, or of Middle Eastern or South Asian heritage.

Also noteworthy is a TSA-authored presentation titled "Femme Fatale: Female Suicide Bombers" that appears to have been drafted in 2006 and that reflects demeaning stereotypes about Muslims and women.[85] The presentation poses the question "Why Females?" and states:

> ➤ Females tend to be more emotional and therefore easier to indoctrinate.

> ➤ Terrorists attempt to embarrass a powerful enemy and show the world that things are desperate that women are now fighting.

The presentation also includes a cartoon of a mother and daughter wearing hijab and arguing over "suicide bomber martyr Barbie," alongside an image of the doll (on a slide that, like all the others, includes the seal of the Department of Homeland Security):

The presentation analyzes the possible motivations of female suicide bombers in ways that emphasize their physical appearances, relationships with men, and sexual histories. For instance, in describing Thenmuli Rajaratnam, a Tamil woman who carried out a suicide bombing in India, it states:

> Supposedly **gang-raped by Indian troops** during *Gandhi's* previous tenor as prime minister; Indian troops were in Sri Lanka as peacekeepers.
> ➤ The "rape" may have contributed to her becoming a suicide bomber.

The presentation describes Palestinian suicide bomber Wafa Idris in terms of her attractiveness, and singles her out as divorced, childless, and therefore an outcast:

> ❑ Attractive, playful with a cheerful personality; socially very popular with western men.
> ❑ Recruited by the **secular** *Al-Aqsa Martyrs Brigade*.
> ❑ A **barren divorcee**; considered an **outcast** in Palestinian society.

It describes Belgian national Muriel Degauque as having unclear motives, but highlights the religious beliefs she and her husband held:

> ❑ Considered to be the **FIRST European** woman suicide bomber.
> ❑ Motive remains unclear.
>   ➢ **Troubled life including drug use**; considered a *"lost soul"* by family.
>   ➢ Possibly sought spirituality and attracted to exotic culture.
> ❑ Married first a Turkish man, then divorced and **married Algerian *Issam Goris*** known to Belgium police as **a radical Islamist**.
> ❑ Moved to Morocco with Algerian husband where she learned Arabic and studied the Koran; adopted **ultra-conservative Islamic beliefs**.

Again, it is unclear whether or how the "Femme Fatale" presentation influenced the behavior detection program or the specific behavioral indicators that the TSA adopted. But the fact that TSA employees drafted and presumably disseminated the presentation is noteworthy of itself and gives cause for concern about potential bias in the TSA's screening activities.

Documents produced by the TSA also shed light on its inclusion of "face pale from recent shaving of beard" as a behavioral indicator of "mal-intent," as revealed in its list of indicators.[86] Many of the documents in the TSA's production include that same "indicator" or a variation of it.[87] Other documents provide context that it almost certainly began as a reference to Muslim men. For instance, a "Training Key" published in 2005 by the International Association of Chiefs of Police (IACP) states:[88]

> • A fresh shave—a male with a fresh shave and lighter skin on his lower face may be a religious Muslim zealot who has just shaved his beard so as not to attract attention, and to blend in better with other people in the vicinity.

A Force Science News article on shoot-to-kill guidelines issued by the IACP is in the same vein:[89]

> A male "with a fresh shave and lighter skin on his lower face may be a religious Muslim zealot who has just shaved his beard so as not to attract attention, and to blend in better....Is the individual wearing too much cologne or perfume, or does he or she smell of talcum powder or scented water (for ritual purification)?"

It appears that the explicit references to Muslims were simply dropped as this "indicator" was included repeatedly in U.S. government-compiled lists of indicators. Its inclusion among the TSA's own behavioral indicators undercuts the TSA's assurances to Congress and the public that its indicators have nothing to do with race or religious affiliation.[90]

Numerous other documents that originated outside the TSA include material that is inflammatory, culturally insensitive, and single-mindedly focused on Muslims. Again, it is unclear whether, and if so how, the TSA used these materials; the fact that it possesses them begs these questions. One problematic example is a presentation drafted sometime after 2005 by the Long Beach Police Department that includes a ten-part "Profile Pre-Test" with questions like these:[91]

In 1968, Bobby Kennedy was shot by:
- A. Superman
- B. Jay Leno
- C. Harry Potter
- D. Male Muslim extremist between the ages of 17 and 40

In 1979, the US Embassy in Iran was taken over by:
- A. Lost Norwegians
- B. Elvis Presley
- C. A tour bus full of 80-year old women
- D. Male Muslim extremists between the ages of 17 and 40

In the 1980's, Americans were kidnapped in Lebanon by:
- A. John Dillinger
- B. The King of Sweden
- C. The Boy Scouts of Canada
- D. Male Muslim extremist between the ages of 17 and 40

In 1998, the Embassies in Kenya and Tanzania were bombed by:
- A. Mr. Rogers
- B. Hilary Clinton
- C. The World Wrestling Federation
- D. Male Muslim extremists mostly between the ages of 17 and 40

The WTC was attacked killing over 3000 innocent people by:
- A. Bugs Bunny, Daffy Duck, Elmer Fudd and Wiley E. Coyote-Super Genius
- B. The Supreme Court of Florida
- C. Mr. Bean and the Vicar of Dibley
- D. Male Muslim extremists mostly between the ages of 17 and 40

As an initial matter, this "test" is factually incorrect—for example, Robert Kennedy's assassin was not Muslim. More critically, the test is absurdly selective: it ignores the fact that overwhelmingly, those who have committed terrorist attacks in the United States and Europe are non-Muslims.[92] By (inaccurately) identifying only attacks purportedly carried out by "male Muslim extremists," the presentation wrongly implies that only male Muslims carry out terrorist attacks. The test concludes with the following question: "As a result of our perceptions, What assumptions can me [sic] make based upon the history [of] previously illustrated items on potential Suicide Attackers?"—a thinly veiled call to profile Muslim men. The presentation also includes a slide on "The Militant Version Of The Koran" and states that "[i]ndoctrination . . . is reinforced through the daily prayer in the mosques and on TV and in radio

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broadcasts."[93] The call to prayer is routine in majority-Muslim countries, and this assertion is absurd in its generality and aspersion.

Other documents originated with entities that lack expertise in either terrorism or transportation security, but nonetheless purport to identify "indicators" that tend to portray Islam or Arabs as security threats. For example, a primer published by the Manhattan Institute for Policy Research titled "Be Prepared for Terrorism" states that "a suicide bomber in the US would likely be an Islamic fundamentalist, either from al-Qaeda or a Palestinian extremist group (Hamas, Hizbolah, etc.)."[94] Similarly, an appendix to an unsourced U.S. military manual assumes that attackers will be Arab or Muslim, and construes praying and religious activity as threatening:[95]

INDICATORS

I-34. Suicide bombers can be either gender and any age. For example, recent Palestinian bombers were female teenagers. You might be looking at a suicide bomber if you see someone who—
- Tries to blend in with the (target) environment.
- Wears ordinary, nondistinctive clothing, military or religious garb, or an oversized, bulky, or unseasonably heavy coat or jacket.
- Demonstrates fanatical religious beliefs by behaviors such as praying fervently, possibly loudly, in public.
- Has a shaved head (Muslim males); wears their hair short and their face clean shaven; or wears fragrance, which is unusual for an Arab man.
- Behaves nervously, that is, sweats, or glances about anxiously.
- Has religious verses from the Quran written or drawn onto their body, hands, or arms.
- (Islamic males) dresses as and pretends to be a woman.
- Carries a bag tightly, clutched close to the body, and in some cases squeezes or strokes it.

Still other documents reveal a deep-seated tendency by their authors to associate Muslims with terrorism. A portion of a bulletin from the New Hampshire Police Standards and Training Council titled "Turbans Do Not a Terrorist Make" cautions, "Not all Muslims wear turbans, and not all people who wear turbans are Muslim." It continues, "None of the 9/11 hijackers wore a turban. Turbans are a poor predictor of a person's terrorist inclinations." While factually correct, these statements disturbingly conflate Muslims with terrorists. According to the bulletin, turbans are a poor predictor of terrorism not because profiling Muslims is biased and a bad way to combat terrorism but because people wearing turbans might be Sikhs instead: "Sikhs have no connection to known terrorist groups, and their religion believes in equality for all people." The bulletin is silent on the tenets of Islam.[96]

The TSA's files also include opinion pieces, discussion threads, and at least one academic article *advocating* the profiling of young Arab males.[97]

As noted above, it remains unclear whether and how materials in the TSA's files that display anti-Muslim bias or focus disproportionately on Muslims factored into the TSA's behavior detection program. However, their existence in the TSA's records is noteworthy not only because the materials do not provide empirical or scientific support for the TSA's behavior detection methods, but also because of the questions the materials raise about potential anti-Muslim bias in the TSA's programs.

5. **The TSA's documents reveal details of specific instances of racial or religious profiling that the TSA concealed from the public.**

Records of investigations into unlawful profiling by behavior detection officers highlight the ease with which behavioral indicators can be used as a pretext for harassing minorities and disfavored groups. They also reveal TSA officials' concern that public disclosure of the details of the profiling could threaten the behavior detection program.

<u>Newark</u>. The TSA's investigation into racial profiling at Newark Liberty International Airport is particularly illuminating. Allegations of biased profiling at the Newark airport became public in 2011, but documents the TSA produced in response to the ACLU's lawsuit include previously undisclosed details of the investigation and administrative records of the subsequent disciplinary measures against a behavior detection manager.[98] Those documents show that Patrick Boyle, the Deputy Assistant Federal Security Director at the Newark airport, came to the following conclusions regarding the actions of that manager:

> Based on my investigation, there is overwhelming evidence to suggest that BDO –TSM (b)(6) engaged in or directed BDO's under his supervision to engage in prohibited activities on a regular basis such as:
>
> 1. Profiling of passengers based on appearance or race
>
> 2. Checking of Travel Documents for the presence of entry stamps and visas
>
> 3. Referrals made without required behaviors present/Assigning nonexistent behaviors to passenger to justify referrals
>
> 4. Improper Law Enforcement referrals to Customs and Border Protection (CBP)
>
> 5. Threats of retaliation and retaliation for not following his direction to conduct improper referrals of passengers

Specifically, Boyle's investigation uncovered numerous instances of outright discriminatory profiling, including that the manager in question had directed his subordinates to scrutinize and improperly refer Dominicans, Mexicans, and Puerto Ricans for secondary screening; created the impression that behavior detection officers would be evaluated and promoted based on the number of referrals they made for secondary screening or law enforcement action; ordered behavior detection officers to "go out on the ramp and watch the Dominican baggage handlers"; sent officers "to the gates where they were supposed to pull Latin American and Arabic looking passengers"; and told officers to assign behaviors to passengers falsely and to make referrals for screening on that basis.[99]

Two transportation security managers based at Boston's Logan International Airport also conducted an administrative inquiry of the profiling allegations at Newark. The managers' findings echoed those of the Boyle investigation, including a finding that "it is reasonable to conclude that a procedure for profiling or identifying illegal aliens was implemented by several BDOs" in Newark. This finding appears to reflect the fact that it is not the role of behavior detection officers to assess or investigate travelers' immigration status. A "SPOT Standardization Team" also evaluated the work of behavior detection

officers at the Newark airport and submitted a report stating that the team "observed and anecdotally heard stories of BDOs who selected passengers . . . because of their race or ethnicity."[100]

As with the TSA's investigations into passenger complaints regarding behavior detection officers, the TSA rightly investigated the allegations of profiling at Newark and took some corrective action—the manager at the heart of the investigation was ultimately demoted. But the TSA was not transparent about the nature and extent of the profiling at Newark. In rejecting the manager's challenge to the demotion, an administrative law judge described the significance of both the misconduct at the Newark airport and the importance that TSA officials placed on preventing it from becoming public. The judge's order included this summary of the testimony of the Newark airport's Deputy Federal Security Director at the administrative hearing:[101]

> DFSD McCaffery testified that even though the public did not become aware of the appellant's actions, including the fact that he improperly directed his subordinates to check travel documents, this did not affect his decision because the potential for embarrassment was great. He also testified that had this information been revealed, it could have potentially killed the BDO program.

Nor does it appear that the TSA was forthright with Congress about the discriminatory profiling. For instance, in August 2011, Congressman Bennie Thompson requested a report from the TSA on the racial profiling at Newark's airport and the reason why a large percentage of arrests resulting from SPOT screening were based on immigration status.[102] In a response in October 2011, TSA Administrator Pistole suggested that those arrests occurred because the travelers actually displayed behaviors associated with deception:[103]

> There are several reasons a large percentage of arrests resulting from SPOT screening are due to an individual's immigration status. An individual who presents him/herself to a TSA security checkpoint knows they will be subjected to a thorough screening prior to gaining access to the sterile area of the airport. A person in the U.S. illegally is aware that they will be subjected to this screening and may have a fear of discovery due to the potential consequences, including arrest and/or deportation from the country. Similarly, a passenger who may intend to harm an

But Administrator Pistole's response failed to acknowledge that investigators had concluded that behavior detection officers at the Newark airport had racially profiled Latino and other travelers and had used the SPOT indicators as a pretext for referring those travelers to secondary.

Miami. The TSA's documents also detail a 2014 investigation into allegations of misconduct by a behavior detection manager at Miami International Airport. This investigation has not previously been made public. At least ten behavior detection officers reported that the manager had "provided false or misleading information to other BDOs to pull certain passengers for referral, possibly targeting passengers"—misconduct that also occurred at the Newark airport.[104]

Chicago. The TSA's files also include records of an investigation in mid-2013 of alleged racial profiling at Chicago's O'Hare International Airport that were not previously public, and that demonstrate the limits of the TSA's ability to assess such allegations.[105] A behavior detection officer submitted an anonymous letter claiming that behavior detection officers in Chicago were encouraged to profile people of Middle Eastern descent, in part by routinely directing additional attention to passengers boarding Royal

Jordanian Airlines and Etihad Airways flights.[106] The TSA found no evidence of racial profiling, but that finding was based primarily on "data" on passengers referred to law enforcement for further investigation—which only totaled nine individuals for the period in question.[107] The TSA does not collect information on the race or ethnicity of the much larger set of individuals who are redirected for additional screening, so it had no way to determine conclusively whether ethnic or religious minorities were screened disproportionately in Chicago—or at any other airport.

Honolulu. Allegations of racial profiling and other misconduct by behavior detection officers at the Honolulu airport became public in late 2011.[108] Two behavior detection officers anonymously claimed that two other officers were known as "Mexicutioners" and were racially profiling Latino passengers and contriving behaviors so as to engineer the arrest of those passengers.[109] The TSA investigated the allegations and found insufficient evidence that the two behavior detection officers had engaged in profiling.[110] However, as with the investigation of profiling in Chicago, materials related to the Honolulu investigation now disclosed to the ACLU show that the TSA lacks an effective means of assessing whether behavior detection officers have engaged in unlawful profiling. Officials investigating the allegations in Honolulu reviewed the limited data available on the ethnicities of passengers referred for law enforcement action and concluded that the data did not suggest that behavior detection officers had targeted Mexicans for *arrest*.[111] But investigators could not evaluate data on the race, religion, or ethnicities of passengers referred for *additional screening*, because the TSA does not compile or maintain that information.

The Honolulu investigation materials also underscore the subjectivity of the indicators. One behavior detection officer submitted a statement saying that he suspected another officer of targeting undocumented immigrants because of the officer's frequent referrals for additional screening, but he didn't report the officer to management "because the BDO program is very subjective when it comes to how people perceive behaviors."[112] Other materials show that one behavior detection officer was responsible for half of the 45 referrals that resulted in law enforcement intervention during a six-month period (only ten of which led to arrests).[113] Such a disproportionate referral rate by a single officer casts doubt on whether the indicators were being interpreted and applied in a consistent and neutral way.

The TSA's documents yield other clues regarding institutionalized acceptance of racial and religious bias among some behavior detection officers. For instance, a behavior detection officer who submitted an anonymous comment to an internal survey of employees stated:

> I've seen BDO managers lie to cover up their mistakes, pass the buck when the job became too difficult for them to handle, and make questionable decisions based on the way someone looks i.e. cute, Asian, Black, etc. . . . What's worse is I've heard a BDO manager refer to passengers as 'towel heads' when speaking in a meeting with other management AND his subordinates. When I reported it, I was told that was to be expected of him, and not to let his comments affect my job function.[114]

Accounts as disturbing as this one, and the well-documented racial profiling elsewhere, heighten our concerns that behavior detection activities cannot be conducted without raising an unacceptable risk of unlawful profiling.[115]

Recommendations

The TSA's mission of ensuring the security of aviation and other transportation is an important and challenging one. In carrying out that mission, the TSA should not utilize methods that are unscientific and unreliable, and that undermine civil liberties. Because the TSA has not shown that its behavior detection program, even if reformed, could be implemented consistently with these basic principles, the program should be discontinued.

To that end, these immediate steps should be taken:

- The TSA Administrator should phase out the TSA's behavior detection and analysis programs, including any pilot initiatives that utilize behavior detection techniques.[116]
- The TSA Administrator should implement a rigorous anti-discrimination training program for all TSA employees that emphasizes the impermissibility of racial and religious profiling, the dangers of implicit bias, and the importance of remedial measures to guard against unlawful profiling.

Congress and other agencies must exercise meaningful oversight:

- Congressional committees with oversight responsibility for the TSA and homeland security matters should hold hearings following up on earlier inquiries into the validity and efficacy of the TSA's behavior detection program. A significant focus of these hearings should be on assessing the risk of unlawful profiling inherent in the use of behavior detection techniques.
- The Department of Homeland Security's Office of the Inspector General should undertake a comprehensive review of the TSA's behavior detection program that examines the purported scientific basis for the program, representations regarding its validity, and the extent to which it has already resulted in unlawful racial or religious profiling.
- The Government Accountability Office should renew its investigation of the TSA's behavior detection program and its earlier conclusion that the "TSA should limit future funding for behavior detection activities."[117]

Asterisks indicate documents obtained through the ACLU's FOIA lawsuit against the TSA, which are available in this database: https://www.aclu.org/foia-collection/tsa-behavior-detection-foia-database.

[1] Letter from John S. Pistole, Adm'r, TSA, to Rep. John Conyers, Jr., Ranking Member, Comm. on the Judiciary (Apr. 28, 2014)*; Off. of Inspector Gen., Dep't of Homeland Sec., OIG-16-111-VR, *Verification Review of Transportation Security Administration's Screening of Passengers by Observation Techniques/Behavior Detection and Analysis Program* (July 8, 2016).

[2] Hugh Handeyside, *Be Careful with Your Micro-Expressions at the Airport*, ACLU Speak Freely (Mar. 19, 2015, 7:30 AM), https://www.aclu.org/blog/be-careful-your-micro-expressions-airport; Hugh Handeyside, *TSA Response to Universal Criticism of Behavior Detection: More Behavior Detection*, ACLU Free Future (June 15, 2015, 10:00 AM), https://www.aclu.org/blog/free-future/tsa-response-universal-criticism-behavior-detection-more-behavior-detection; Jay Stanley, *SPOT Off*, ACLU Speak Freely (June 13, 2013, 3:58 PM), https://www.aclu.org/blog/spot.

[3] U.S. Gov't Accountability Off., GAO-14-159, *TSA Should Limit Future Funding for Behavior Detection Activities* (Nov. 8, 2013); Off. of Inspector Gen., U.S. Dep't of Homeland Sec., OIG-13-91, *Transportation Security Administration's Screening of Passengers by Observation Techniques (REDACTED)* (May 2013); *TSA's SPOT Program and Initial Lessons from the LAX Shooting: Hearing Before the Subcomm. on Transp. Sec. of the H. Comm. on Homeland Sec.*, 113th Cong. (2013); *Behavioral Science and Security: Evaluating TSA's SPOT Program: Hearing Before the Subcomm. on Investigations & Oversight of the H. Comm. on Sci., Space & Tech.*, 112th Cong. (2011); *id.* (statement of Maria Hartwig); Sharon Weinberger, *Airport Security: Intent to Deceive?*, 465 Nature 412–415 (May 2010).

[4] Jana Winter, *Exclusive: TSA 'Behavior Detection' Program Targeting Undocumented Immigrants, Not Terrorists*, The Intercept (Apr. 6, 2015, 10:23 AM), https://theintercept.com/2015/04/06/exclusive-tsa-behavior-detection-program-targeting-immigrants-terrorists/.

[5] Steve Strunsky, *Concern Over Racial Profiling Against Hispanic Passengers at Newark Airport Continues in Wake of Report*, NJ.com (Aug. 5, 2011, 6:15 AM), http://www.nj.com/news/index.ssf/2011/08/concerns_of_discrimination_aga.html; Associated Press, *TSA Probes Racial Profiling Accusations at Honolulu Airport*, Honolulu Star Advertiser (Dec. 1, 2011), http://www.staradvertiser.com/2011/12/01/breaking-news/tsa-probes-racial-profiling-accusations-at-honolulu-airport; Michael S. Schmidt & Eric Lichtblau, *Racial Profiling Rife at Airport, U.S. Officers Say*, N.Y. Times (Aug. 11, 2012), http://www.nytimes.com/2012/08/12/us/racial-profiling-at-boston-airport-officials-say.html.

[6] Jana Winter & Cora Currier, *Exclusive: TSA's Secret Behavior Checklist to Spot Terrorists*, The Intercept (Mar. 27, 2015, 9:59 AM), https://theintercept.com/2015/03/27/revealed-tsas-closely-held-behavior-checklist-spot-terrorists/; Schmidt & Lichtblau, *supra* note 5.

[7] Winter & Currier, *supra* note 6.

[8] N.Y.U. Ctr. for Hum. Rts. & Global Just. (CHRGJ), *Minorities Will Bear the Brunt of "Shoot-to-Kill" Policies* (May 8, 2006).*

[9] FOIA Request Letter from ACLU to TSA (Oct. 1, 2014), https://www.aclu.org/sites/default/files/assets/tsa_spot_foia_request.pdf.

[10] *ACLU v. TSA*, ACLU, https://www.aclu.org/cases/aclu-v-tsa (last visited Jan. 6, 2017).

[11] LINC Message from Mo McGowan, Assistant Adm'r, TSA, to Fed. Sec. Dirs. (Oct. 6, 2008).*

[12] Behavior Detection & Analysis (BDA) Program Off., TSA, *Screening of Passengers by Observation Techniques Referral Report* 2 (Dec. 2013).*

[13] TSA, *Behavior Detection Officer (BDO) Plain Clothes Operations (PCO) Required Guidance* (Dec. 19, 2013).*

[14] TSA, *Behavior Detection & Analysis Bi-Weekly Shift Brief* (Apr. 29, 2014)*; Letter from Designated Pers. Rep. for EBDO to Jason Pantages, Assistant Fed. Sec. Dir. for Screening, TSA, L.A. Int'l Airport 2 (Feb. 13, 2013).*

[15] TSA, *Instructor Guide, Lesson 5: SPOT Referral Process*, in SPOT Refresher Training 9.*

[16] TSA, *Casual Conversation (CC) Worksheet*, in Pilot 1.0*; *Lesson 5*, *supra* note 15, at 14.*

[17] *Lesson 5*, *supra* note 15, at 10.*

[18] TSA, *Behavior Detection & Analysis Bi-Weekly Shift Brief* 2 (May 13, 2014).*

[19] U.S. Dep't of Homeland Sec., *Civil Liberties Impact Assessment for the Screening of Passengers by Observation Techniques (SPOT) Program* 5 (Mar. 5, 2009)*; *id.* at 8–9.*

[20] Winter & Currier, *supra* note 6.

[21] Email from Matthew Johnsen, Multicultural Branch, Disability & Multicultural Division, TSA, to [Redacted] (Aug. 26, 2013).*

[22] Letter from Daniel Scherer, TSA, to [Redacted] (Jan. 1, 2014).*

[23] Email from Kimberly Bandy, Multicultural Branch, TSA, to [Redacted] (2013).*

[24] Memorandum from Kimberly Bandy & Bryan W. Hudson, Pol'y Advisor, to Kimberly Walton, Assistant Adm'r, Off. of Civil Rights & Liberties, & Christine Griggs, Deputy Assistant Adm'r (Jan. 31, 2014).*

[25] *SPOT Referral Report*, *supra* note 12, at 18.*

[26] *Behavioral Science and Security: Evaluating TSA's SPOT Program*, *supra* note 3.

[27] Aldert Vrij & Samantha Mann, *Detecting Deception: The Benefit of Looking at a Combination of Behavioral, Auditory and Speech Content Related Cues in a Systematic Manner*, 13 Group Decision & Negots. 61–79, 62 (2004).*

[28] Charles F. Bond, Jr. & Bella M. DePaulo, *Accuracy of Deception Judgments*, 10 Personality & Soc. Psychol. Rev. 214, 231 (2006).*

[29] Leif A. Strömwall, Pär Anders Granhag & Maria Hartwig, *Practitioners' Beliefs about Deception*, in The Detection of Deception in Forensic Contexts 229–250, 236 (Granhag & Strömwall eds., 2004).*

[30] Aldert Vrij, Samantha Mann, Susanne Kristen & Ronald P. Fisher, *Cues to Deception and Ability to Detect Lies as a Function of Police Interview Styles*, 31 Law & Hum. Behav. 499–518, 514 (2007).*

[31] Maria Hartwig & Charles F. Bond, Jr., *Why Do Lie-Catchers Fail? A Lens Model Meta-Analysis of Human Lie Judgments*, 137 Psychol. Bull. 643–659, 643 (2011).*

[32] U.S. Gov't Accountability Off., GAO-10-763, *Efforts to Validate TSA's Passenger Screening Behavior Detection Program Underway, But Opportunities Exist to Strengthen Validation and Address Operational Changes* (May 2010).

[33] GAO-14-159, *supra* note 3.

[34] *Id.*

[35] *Id.*

[36] TSA, Part 1*, Report of Investigation of BDO at Miami International Airport*, 2–3 (Apr. 14, 2014)*; Letter from John S. Pistole to Rep. Bennie G. Thompson., Ranking Member, Comm. on Homeland Sec., H.R. 3 (Sept. 21, 2011).*

[37] Vrij & Mann, *supra* note 27, at 64.*

[38] Leif A. Strömwall et al., *supra* note 29, at 241.* *See also* Bond, Jr. & DePaulo, *supra* note 28, at 229* ("It is clear that experts are not good lie detectors."); Aldert Vrij, *Detecting Lies and Deceit: Pitfalls and Opportunities* 4 (Graham Davies & Ray Bull eds., Wiley 2d ed. 2008)* ("Research has indicated that even professional lie catchers, such as customs officers and police officers, often make incorrect decisions, and that their ability to separate truths from lies typically does not exceed that of laypersons."); *id*. at 162* ("not one single study has shown that police officers are superior to laypersons in discriminating between truth tellers and liars.").

[39] Vrij & Mann, *supra* note 27, at 73.*

[40] Mark G. Frank & Thomas Hugh Feeley, *To Catch a Liar: Challenges for Research in Lie Detection Training*, 31 Journ. of Applied Comms. Res. 58–75 (2003).*

[41] Stephen Porter & Leanne ten Brinke, *The Truth About Lies: What Works in Detecting High-Stakes Deception?*, 15 Legal & Crim. Psychol. 57–75, 59 (2010).*

[42] Vrij, *supra* note 38, at 165.*

[43] Hartwig & Bond, Jr., *supra* note 31, at 643.* *See also* Vrij, *supra* note 38, at 8* ("Most nonverbal cues appear not to be associated with deception and some nonverbal cues are, at best, only weakly related to deception."); *id*. at

49–50* ("The complex relationship between nonverbal communication and deception makes it unlikely that clear, diagnostic, nonverbal cues to deception exist. Deception research . . . has supported this view.").

[44] Winter & Currier, *supra* note 6.

[45] Vrij, *supra* note 38, at 382.*

[46] Vrij & Mann, *supra* note 27, at 64.* *See also* Leif A. Strömwall et al., *supra* note 29, at 231* ("The most commonly expressed belief—liars are more gaze aversive—does not fit with reality."); *id*. at 232*; Vrij et al., *supra* note 30, at 509* ("there is no empirical evidence" to support assumption that liars "are more likely to cross their legs, shift in their chair, and perform grooming behaviors," and "lie detectors who pay attention to such cues perform significantly worse than lie detectors who do not"); Vrij, *supra* note 38, at 60* ("gaze behaviour is not related to deception.").

[47] Winter & Currier, *supra* note 6*.*

[48] Bond, Jr. & DePaulo, *supra* note 28, at 231.*

[49] The TSA's documents also include a damning assessment of the use of facial "micro-expressions"—on which behavior detection officers receive training, *see* TSA, U.S. Dep't of Homeland Sec., *Screening of Passengers by Observation Techniques: Fiscal Year 2010 Report to Congress* 5 (Mar. 15, 2010)*—as indicators of deception, *see* Porter & Brinke, *supra* note 41, at 65.*

[50] Vrij & Mann, *supra* note 27, at 65.*

[51] Vrij, *supra* note 38, at 4.*

[52] Leif A. Strömwall et al., *supra* note 29, at 237.* *See also* Vrij et al., *supra* note 30, at 501* ("Truthful suspects were *less* cooperative than deceptive suspects.") (emphasis in original).

[53] Cheryl L. Giddens, et al., *Vocal Indices of Stress: A Review*, 27 Journal of Voice 390.e21–e29 (2013)*; *id.* at 390.e24.*

[54] Vrij, *supra* note 38, at 179.* *See also* Joseph Henrich, Steven J. Heine & Ara Norenzayan, *The Weirdest People in the World?*, 33 Behav. & Brain Scis. 1–75 (2010)* (explaining how the near-exclusive use of subjects from Western, educated, wealthy societies in behavioral studies has led to an "alarming situation," because such individuals "are among the least representative populations one could find for generalizing about humans.").

[55] Vrij, *supra* note 38, at 180.*

[56] *Id.* at 126–27.*

[57] Bond, Jr. & DePaulo, *supra* note 28, at 231.*

[58] Andreas Puschmann, M.D. & Zbigniew K. Wszolek, M.D., *Diagnosis and Treatment of Common Forms of Tremor* 11 (Feb. 2011) (unpublished manuscript) (on file with Nat'l Inst. of Health).*

[59] Vrij, *supra* note 38, at 71–73*; *id.* at 179*; *id.* at 74.*

[60] U.S. Dep't of Homeland Sec., *SPOT Referral Report Validation Study Final Report Volume I: Technical Report* (Apr. 5, 2011).*

[61] *Id.* at iv.*

[62] GAO-14-159, *supra* note 3.

[63] FOIA Request, *supra* note 9.

[64] Richard G. Priem et al., *Terrorists and Suicide Tactics: Preparing for the Challenge*, Police Chief, Sept. 2007 (accessed Jan. 6, 2015), at 2.*

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[65] Anat Berko & Edna Erez, *"Ordinary People" and "Death Work": Palestinian Suicide Bombers as Victimizers and Victims*, Intelligence & Terrorism Info. Ctr. at the Ctr. for Special Stud. (Mar. 29, 2006).*

[66] *Confronting the Suicide-Bomber Threat*, Goliath Bus. News (Nov. 1, 2003) (accessed Jan. 13, 2015)*; *Transcripts, Anderson Cooper 360 Degrees*, CNN (May 21, 2004) (accessed Jan. 6, 2015)*; Raksha Shetty, *Immune to Suicide Attacks; So Far*, CBS News (July 29, 2004) (accessed Jan. 6, 2015).*

[67] Jamie Bartlett, Jonathan Birdwell & Michael King, *The Edge of Violence: A Radical Approach to Extremism*, Demos (2010); Decl. of Marc Sageman, *Latif v. Lynch*, No. 3:10-cv-750 (D. Or. Aug. 7, 2015); Matt Apuzzo, *Who Will Become a Terrorist? Research Yields Few Clues*, N.Y. Times (Mar. 27, 2016), http://www.nytimes.com/2016/03/28/world/europe/mystery-about-who-will-become-a-terrorist-defies-clear-answers.html.

[68] Michael J. Hopmeier, *Potential Warning Signs and Indicators Associated with Preparation for and Execution of a Suicide Attack,* Unconventional Concepts, Inc. 14 (Apr. 23, 2003)*; *Suicide/Homicide Bombings: Review of Middle Eastern Tactics & Technique,* Emergency Response & Res. Inst. 10 (Apr. 2003)*; *Protecting Your Jewish Institution: Security Strategies for Today's Dangerous World*, Anti-Defamation League 75 (2005).*

[69] Hopmeier, *supra* note 68, at 37.*

[70] Carlos Vasquez, *Recognition and Identification of Energetic Materials*, FDNY HazMat Operations, 22.*

[71] *Suicide/Homicide Bombings*, *supra* note 68*, at 6.*

[72] *U.S. Homeland Security Information Bulletin – Tactics & Techniques of Suicide/Homicide Bombers*, Am. Club, Sept. 19, 2003.* As frivolous as some of these indicators may seem, their use by law enforcement personnel can be deathly serious. Various articles in the TSA production recount that the International Association of Chiefs of Police adopted a shoot-to-kill policy for individuals officers believe to be suicide bombers, based in part on indicators such as nervousness, avoidance of eye contact, and excessive sweating. *See* Associated Press, *Police Agree on Shoot-to-Kill Rules*, Infowars.com (Aug. 4, 2005) (accessed Jan. 13, 2015)*; Sari Horwitz (Wash. Post), *Aim for the Head, Police Chiefs Agree*, Sydney Morning Herald (Aug. 5, 2005) (accessed Jan. 5, 2015)*; Sari Horwitz (Wash. Post), *Police Chiefs Endorse Shoot-to-Kill Policy*, Standard (Aug. 5, 2005) (accessed Jan. 13, 2015).* On at least one occasion, that policy resulted in tragedy: British police shot Jean Charles de Menezes, an innocent Brazilian electrician, seven times in the head after he ran to catch a subway train, because the police determined that he fit the "description and demeanor" of a suicide bomber. *See* Jude McCulloch & Vicki Sentas, *The Killing of Jean Charles de Menezes: Hyper-Militarism in the Neoliberal Economic Free-Fire Zone*, 33 Soc. Just. 92–107 (2006).*

[73] Am. Club, *supra* note 72.*

[74] FBI, *The FBI's Terrorism Quick Reference Card*.* *See, e.g.*, *Best Practices in Safety and Security to Safeguard Tourism Against Terrorism: A Tourism Crisis Leadership Guide*, Asia-Pacific Econ. Coop. Tourism Working Group 558 (Oct. 2004)*; Joint Chiefs of Staff, *Joint Tactics, Techniques, and Procedures for Antiterrorism*, Joint Pub. 3-07.2, VI-16 (Dec. 8, 2004)*; Nigel Morris-Coterill, *In Hot Pursuit of Terrorist Funds*, presented at 6th Law Asia Business Law Conference, 18 (Oct. 7–8, 2004, Kuala Lumpur)*; U.S. Army Training & Doctrine Command, *Suicide Bombing in the COE*, DCSINT Handbook No. 1.03, IV-2 (Aug. 10, 2006)*; *Context is Everything*, post to internal TSA portal by unknown author (accessed Jan. 13, 2015)*; Christopher S. Martin, *Suicide Bombers*, Long Beach Police Department, 60–61*; *Responding to Bomb Threats, Bombing Incidents and Suicide Bombers*, Police Officers Safety Association, 91.*

[75] *Suicide Bombing Indicators*, Am. Inst. for Res. 3.*

[76] TSA, *Fiscal Year 2010 Report to Congress*, *supra* note 49, at 2.*

[77] *Id.* at 5.* *See also* Hearing on the BDO Program Before the Subcomm. on Transp. Sec. of the H. Comm. on Homeland Sec., 113th Cong. 3 (Nov. 14, 2013) (statement of John S. Pistole)* ("BDOs are trained to identify

behavior cues that have been shown through research, science, and decades of domestic and international law enforcement experience to be reliable indicators and predictors of anomalous or suspicious behavior.").

[78] TSA, *Fiscal Year 2010 Report to Congress*, *supra* note 49, at 3.*

[79] *E.g.*, "Evasive or vague responses," "Cold penetrating stare," "Exaggerated yawning," "Exaggerated throat clearing," "Gestures don't match the verbal message," "Displays arrogance," "Gives non-answers," "Wearing improper attire for location," "Appears to be confused or disoriented," "Overly specific with answers that would appear to indicate the information is memorized," "Well-rehearsed answers that may not respond to questions or that may appear to be memorized," "bag does not suit the individual's appearance." Winter & Currier, *supra* note 6.

[80] Letter from Rep. Paul Broun, Chairman, Subcomm. on Investigations & Oversight, H.R., to John S. Pistole (Mar. 8, 2011).*

[81] TSA, *Answers to Questions from House Hearing on Behavioral Science and Security Evaluating TSA SPOT Program* 6.* In a letter responding to requests for information and criticisms of the SPOT program from Rep. Bennie Thompson, TSA Administrator John Pistole also wrote that the SPOT program "was developed based on behavior pattern recognition techniques used by various Government agencies and supported by scientific research." Letter from John S. Pistole to Bennie G. Thompson (Sept. 27, 2012).*

[82] Letter from John S. Pistole to Bennie G. Thompson (Apr. 28, 2014).*

[83] Letter from Jerry Levine, Director, DHS GAO/OIG Liason Off., to Steve Lord, Director, Homeland Sec. & Just. Issues, 1–2.*

[84] Memorandum from John S. Pistole to all TSA BDOs (Oct. 6, 2012).*

[85] *Female Suicide Bombers*, Off. of Law Enforcement, Fed. Air Marshal Serv., TSA.*

[86] Winter & Currier, *supra* note 6.

[87] Am. Club, *supra* note 72*; *The FBI's Terrorism Quick Reference Card*, *supra* note 74*; *see also* Hearing on BDO Program, *supra* note 77 (statement of John Pistole).*

[88] *Training Key #581, Suicide (Homicide) Bombers: Part I*, Int'l Ass'n of Chiefs of Police Inc. 5 (2005).*

[89] *Suicide Bombers: What New IACP "Training Keys" Say You Need to Know About a Deadly Threat That's Just Waiting to Happen Here*, Force Sci. News (Sept. 1, 2005) (accessed Jan. 12, 2015).*

[90] Hearing on BDO Program, *supra* note 77, at 6 (John Pistole, the TSA Administrator at the time, testified to the U.S. House Subcommittee on Transportation Security in November 2013 that "[t]he Standard Operating Procedures (SOPs) and training for TSA's BDA [Behavior Detection and Analysis] program, in coordination with the DHS Office of Civil Rights and Liberties (CRCL), provide clear instructions to ensure that referrals for additional screening are made based on specific observed behavioral criteria without regard to nationality, race, color, ethnicity, or religious affiliation.").*

[91] Martin, *supra* note 74.*

[92] Dean Obeidallah, *Are All Terrorists Muslims? It's Not Even Close*, Daily Beast (Jan. 14, 2015, 5:45 AM), http://www.thedailybeast.com/articles/2015/01/14/are-all-terrorists-muslims-it-s-not-even-close.html.

[93] Martin, *supra* note 74, at 28*; *id.* at 19*; *id.* at 33.*

[94] R.P. Eddy, *Be Prepared for Terrorism, How to Survive a Suicide Bombing*, Manhattan Inst. for Pol'y Res. (2014) (accessed Jan. 5, 2015).*

[95] *Handbook FM 3-21.8, Appendix I: Improvised Explosive Devices, Suicide Bombers, and Unexploded Ordnance* 9 (accessed Jan 13, 2015).*

[96] Barbara A. Nadel, *Building Security: Handbook for Architectural Planning and Design*, 6 (McGraw-Hill, 2004).*

[97] *See* Paul Sperry, *Politically Correct Suicide: Still No Subway Profiling*, Frontpagemag.com (July 22, 2005) (accessed Jan. 6, 2015)*; *see also* Bruce Schneier, *Profiling*, Schneier on Security 5 (July 2005) (accessed Jan. 6, 2015)*; *id*. at 16–17*; Daniel B. Kennedy, *A Précis of Suicide Terrorism*, 3 Journ. of Homeland Sec. & Emergency Mgmt. 4 (2006).* Notably, the TSA also produced a summary of a report prepared by the NYU Center for Human Rights and Global Justice (CHRGJ) that sharply criticizes the use of behavioral indicators, which the report concludes "are in fact proxies for racial, ethnic, and religious profiling," CHRGJ, *supra* note 8*, and a well-sourced, written submission from CHRGJ to the UN Human Rights Committee dated July 2006 noting the following:

- The use of overly broad physical and behavioral characteristics as indicators "will in the overwhelming number of cases end up targeting Muslims, Arabs, and South Asians, or those perceived to be Muslim, Arab, or South Asian." N.Y.U. CHRGJ, *Racial Profiling and Lethal Force in the 'War on Terror'*, written submission to U.N. Hum. Rts. Comm., 87th Session, 2 (July 2006).*

- In a climate of fear and heightened scrutiny surrounding Muslims, "it is unrealistic to expect that police officers will implement behavioral indicators in a neutral manner." *Id.* at 4.*

[98] Steve Strunsky, *Report: Newark Airport Screeners Targeted Mexicans*, NJ.com (June 12, 2011, 6:00 AM), http://www.nj.com/news/index.ssf/2011/06/report_newark_airport_screener.html.

[99] Letter from Patrick J. Boyle, Deputy Assistant Fed. Sec. Dir., Newark Liberty Int'l Airport, to Barbara Powell, Fed. Sec. Dir., Newark Liberty Int'l Airport (Feb. 17, 2010).*

[100] *Id.* at Attachment #1, *SPOT Standardization Team Report* (Nov. 20, 2009).*

[101] *Id.* at Attachment #4, *Merit Systems Protection Board Initial Decision* (June 24, 2011).*

[102] Letter from Bennie G. Thompson to John S. Pistole (Aug. 12, 2011).*

[103] Letter from John S. Pistole to Bennie G. Thompson 2 (Oct. 20, 2011).*

[104] TSA, Part 1, *supra* note 36.*

[105] TSA, Part 1*, Report of Investigation of BDO at Chicago O'Hare International Airport* (July 29, 2013).*

[106] *Id.* at Attachment #1*, Memorandum of Records Revie*w (Feb. 28, 2013).*

[107] *Id.* at Attachment #2, *Memorandum of Records Review* (Apr. 14, 2013).* The TSA investigators did check what percentage of the total number of referrals for additional screening were for passengers scheduled to fly on Royal Jordanian Airlines and Etihad Airways (data which is redacted in the documents), but there is no indication that they compared that percentage to referrals related to other airlines, making it difficult to assess the significance of the data. *See* TSA, Part 2, *Report of Investigation of BDO at Chicago O'Hare International Airport* (July 29, 2013), at Attachment #19, *Memorandum of Records Review* (July 5, 2013).*

[108] Associated Press, *supra* note 5.*

[109] TSA, Part 1, *Report of Investigation of BDO at Honolulu International Airport*, 6 (Mar. 5, 2012).*

[110] Notably, however, the investigation materials show that at least one officer had witnessed specific instances in which other officers had profiled Latino passengers. *See* TSA, Part 2, *Report of Investigation of BDO at Honolulu International Airport* (Nov. 28, 2011)*; TSA, Part 3, *Report of Investigation of BDO at Honolulu International Airport* (Aug. 28, 2011).* There is no indication in the materials that investigators credited or followed up on those observations.

[111] TSA, Part 2, *supra* note 110.*

[112] TSA, Part 7, *Report of Investigation of BDO at Honolulu International Airport*, 2 (Jan. 23, 2012).*

[113] TSA, Part 1, *supra* note 109 (memorandum from Daniel Burche to Stanford Miyamoto).*

[114] *Updating the Personnel Selection System for Behavior Detection Officers: Job/Task Analysis Report Volume II: Appendices*, Am. Inst. for Res. BB-31 (July 20, 2010).*

[115] Winter, *supra* note 4; Schmidt & Lichtblau, *supra* note 5; GAO-14-159, *supra* note 3.

[116] Handeyside, *TSA Response*, *supra* note 2.

[117] GAO-14-159, *supra* note 3.