UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

AYMAN LATIF, et al., <i>Plaintiffs</i> ,	Case 3:10-cv-00750-BR
V.	
LORETTA E. LYNCH, et al.,	DECLARATION OF MARC SAGEMAN IN OPPOSITION TO DEFENDANTS' CROSS MOTION FOR SUMMARY
Defendants.	CROSS-MOTION FOR SUMMARY JUDGMENT

I, Marc Sageman, hereby declare and state as follows:

1. I graduated from Harvard University in 1973 with an A.B. in social relations, and I then attended New York University, where I earned M.A. and Ph.D. degrees in political sociology in 1977 and 1982, respectively, and an M.D. degree in 1979. After serving as a flight surgeon in the U.S. Navy, I joined the Central Intelligence Agency as a case officer in 1984. Nearly three years of my seven-year career there was devoted to helping run an insurgency against the Soviet occupation of Afghanistan and its Communist government—an insurgency involving individuals that the Soviets and the Afghan government would have called terrorists. In 1991, I returned to medicine. I hold an active license to practice medicine in Maryland, and have maintained a private practice in forensic psychiatry to the present.

2. I have taught law and psychiatry, as well as the social psychology of political conflict focusing on genocide and terrorism, at the University of Pennsylvania. I have written two books, *Understanding Terror Networks* (2004) and *Leaderless Jihad* (2008), both published by the University of Pennsylvania Press. I am also on the editorial boards of two journals in the

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terrorism research field, *Terrorism and Political Violence* and *Dynamics of Asymmetrical Conflict*, and regularly peer review submissions to them.

3. In 2006-2007, I worked as a consultant for the U.S. Secret Service, where I tracked the terrorist threat to the United States based on daily threat assessments. I spent the following year as the scholar in residence at the New York Police Department, providing my scientific expertise to them. During that year, I also taught a graduate seminar on terrorism at Columbia University.

4. Starting in 2006, I worked on a four-year project on violent terrorism for the U.S. Air Force Research Laboratory. I presented my findings from this research to the faculty of the FBI Academy in Quantico, VA in April 2010. I also spent three and a half years as a special advisor to the U.S. Army Deputy Chief of Staff (Intelligence) for the Insider Threat. In that role, I reviewed all cases of suspected terrorists and spies in the U.S. Army since World War II. In conjunction with the FBI, I investigated and interviewed several of the suspects during my tenure. During that time, I was also dispatched to Kabul as the Political Officer for the International Security Assistance Forces to help mitigate the "green on blue" violence—the killing of coalition troops by Afghan forces—that was threatening to split up the coalition.

5. I have been qualified as an expert witness on terrorism for both the prosecution and defense in criminal cases, and the defense in civil cases. I have interviewed about 30 convicted terrorists, mostly in prison, and numerous other individuals suspected or accused of terrorism in various countries, including the United States, in connection with my work as an expert or in support of my research.

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6. I make this declaration in support of the plaintiffs' responses in opposition to the defendants' cross-motions for summary judgment in this case. As this case concerns the rights of U.S. persons, I focus on U.S. persons in this declaration.

Review of Government Procedures and Bases for Nomination to the No Fly List

7. I have reviewed the defendants' two submitted declarations, one by Mr. Michael Steinbach, Assistant Director of the FBI's Counterterrorism Division (the "Steinbach Declaration"), and the other by Mr. Clayton Grigg, Deputy Director for Operations of the Terrorist Screening Center ("TSC") (the "Grigg Declaration"), which describe the No Fly List nomination process. I also reviewed testimony by Mr. Christopher Piehota, the TSC director, in before the House Subcommittee on Transportation Security on September 18, 2014 (available on the FBI website at https://www.fbi.gov/news/testimony/tscs-role-in-the-interagencywatchlisting-and-screening-process). Finally, I reviewed the National Counterterrorism Center's

(NCTC) March 2013 *Watchlisting Guidance* (the "*Guidance*"), a manual for the inclusion of individuals on various watch lists, including the No Fly List, which has been submitted into the record in this case.¹

8. Based on my review of these documents, I understand that nomination to the Terrorist Screening Database ("TSDB"), which is maintained by the Terrorist Screening Center, requires reasonable suspicion that an individual is a known or suspected terrorist. (Grigg Declaration ¶ 15.) Reasonable suspicion, according to the documents, means "articulable' intelligence or information which, based on the totality of the circumstances and taken together with rational inferences from those facts, creates reasonable suspicion that an individual is

¹ Multiple passages in the *Guidance* and the declarations of Messrs. Steinbach and Grigg, as well as Mr. Piehota's testimony, are very similar and indicate that the *Guidance* is an official government document. *See* Steinbach Decl. ¶¶ 9, 13; Grigg Decl. ¶¶ 17, 25; *Guidance* at 11-12, 20, 52, 83; *see generally* Piehota testimony.

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known or suspected to be or has been knowingly engaged in conduct constituting, in preparation for, in aid of, or related to terrorism and/or terrorist activities." (*Id.*, Steinbach Declaration $\P 9$.)

9. I also understand that the "derogatory information" that supports inclusion in the TSDB can also be used to nominate an individual for inclusion on the No Fly List if that information "establishes a reasonable suspicion that the individual meets additional heightened derogatory criteria that goes above and beyond the criteria required for inclusion in the broader TSDB." (Grigg Declaration ¶ 16.) Based on my review of the criteria for inclusion on the No Fly List, the common thread in the criteria is an apparent threat of a violent act of terrorism.

10. Mr. Steinbach states that the TSDB and the No Fly List are "preventive measures" that "differ in fundamental respects from the FBI's role in the criminal process, because the overriding goal in using the TSDB is to protect the United States from harm, not to collect evidence of a crime already committed for purposes of prosecution." (Steinbach Declaration, ¶ 7.) The government describes the assessments that underlie inclusion on the No Fly List as "predictive judgments" or "predictive assessments" about potential threats to national security. (*See, e.g.*, Defendants' Consolidated Memorandum at 1, 6, 15, 17.)²

² Based on a search of publicly available sources, it appears that the purpose of the No Fly List has evolved over time. A Congressional Research Service report on Air Passenger Prescreening and Counterterrorism reported that the FBI administered a "no fly" watchlist prior to September 11, 2001 and until November 2001 that included individuals who were considered a direct "known threat" to U.S. civil aviation. Bart Elias, William Krouse & Ed Rappaport, 2005, *Homeland Security: Air Passenger Prescreening and Counterterrorism*, Washington, D.C.: Congressional Research Center Report for Congress, March 4, 2005: 1. In a December 2002 PowerPoint, the Transportation Security Intelligence Service stated that on the eve of September 11, 2001, there were only sixteen individuals identified as "no transport." TSA Watch Lists, December 2002, a PPT presentation by the Transportation Security Intelligence Service, U.S. Department of Transportation, entered as Attachment A, Part 1, Gordon v. FBI, 2003 available athttps://www.aclunc.org/sites/default/files/asset_upload_file371_3549.pdf. (The government documents available in this file show that the problem of "false positives" from the list, which I discuss below, was already plaguing TSA by the fall of 2002.) That original purpose of the No Fly List is memorialized in the first criterion for inclusion in the present No Fly List. *Guidance*, page 51. Since then, the No Fly List has expanded as noted in the second criterion for inclusion: "Any person, regardless of citizenship, who represents a threat of committing an act of "domestic terrorism" with

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11. The declarations of Messrs. Grigg and Steinbach and the *Guidance* describe a process for periodically reviewing the accuracy of the "derogatory information" that led to an individual's placement on the No Fly List. (*See* Grigg Declaration, ¶¶ 19, 28; Steinbach Declaration, ¶¶ 12-13.) However, they do not address the threshold issue of how nominators make these "predictive judgments," on what basis, and whether such predictive judgments can be made validly and reliably according to accepted scientific principles of conditional probability.

12. The *Guidance* defines a "known terrorist" as "an individual whom the U.S. Government knows is engaged, has been engaged, or who intends to engage in terrorism and/or terrorist activity," including those charged or convicted of a terrorism-related crime, or "identified as a terrorist or member of a designated foreign terrorist organization pursuant to" specified authorities. (*Guidance*, p. 35.) It defines a "suspected terrorist" as "an individual who is reasonably suspected to be, or has been, engaged in conduct constituting, in preparation for, in aid of, or related to terrorism and/or terrorist activities based on an articulable and reasonable suspicion." (*Guidance*, p. 37.)³

13. My analysis below assumes that if the U.S. government knows that a U.S. person has been or is engaged in terrorism or terrorist activities, that individual generally either has been charged with or convicted of a terrorism-related crime, or is closely monitored prior to arrest, or abroad beyond the reach of the law. I make that assumption because in my experience, the U.S. government would aggressively react to such information about a person. In all my years of

respect to the homeland." *Id.* The No Fly List was further extended to include any "threat of committing an act of international terrorism against any U.S. Government facility abroad and any associated or supporting personnel" (third criterion) and finally "any threat of engaging in or conducting a violent act of terrorism" by someone who is "operationally capable" (fourth criterion). *Id.*

³ The *Guidance* further defines other terms, including "reasonable suspicion," "derogatory information," "terrorism and/or terrorist activities," and elaborates on the process for nomination to various databases and related watchlists. (*Guidance*, p. 33, paragraph C Appendix 1, 35). I do not reproduce the definitions or other details of the process here.

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experience, I do not recall the federal government ever having allowed an individual to remain at large within the United States for any significant length of time once the government possessed probable cause that the individual had engaged or was engaged in terrorist activity. For these categories of people, the criminal justice system normally serves as the basis to assess the validity of the government's judgment and evidence. In my analysis, I focus on the government's use of "predictive judgments" with respect to individuals for whom the government does not have probable cause to believe they have engaged in or are engaging in terrorist activity, and for that reason cannot be described as "known terrorists." Instead, I focus on individuals whom the government suspects may someday engage in or support terrorist activities, and any scientific basis for those predictions.

Lack of Reliable Indicators that an Individual Will Engage in Political Violence

14. Through my experience in government, academia, and as a consultant in various capacities, I have become very familiar with the terrorism research field. Nearly all terrorism researchers agree that acts of terrorism are fundamentally individual acts of political violence.⁴ Despite decades of research, however, we still do not know what leads people to engage in political violence. Attempts to discern a terrorist "profile" or to model terrorist behavior have failed to yield lasting insights, in part because of the lack of quality empirical data that could be used to test the validity of such a model.

⁴ As the *Guidance* points out, under federal law, there are numerous definitions of "terrorism" and "terrorist activities." *Guidance* at Y, Appendix 1. There are also numerous definitions of terrorism in international law and treaties, and no single agreed-upon, definition. Solely for the purposes of this declaration, I do not take issue with the definitions of terrorism under 18 U.S.C. § 2331, or the Guidance's definition of terrorism or terrorist activity, all of which incorporate references to violent acts intended to intimidate or coerce a civilian population or influence the policy of a government, and therefore at least arguably include violence that is political.

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15. Because of my security clearances and contract work in government agencies, I am one of the few people who has experience in both the academic and intelligence communities, and I have observed a stagnation in terrorism research resulting from a structural gap imposed by the government. (*See* Marc Sageman, 2014, "The Stagnation in Terrorism Research," *Terrorism and Political Violence*, 26: 565 – 580.) On one hand, there are people in the academic community with the methodological sophistication to generate new conceptual and empirical breakthroughs in terrorism research, but they lack the data to do so because the government has withheld it through over-classification. As a result, there is wild speculation and major disagreement within the academic community as to the nature of the process of turning politically violent. On the other hand, there is the intelligence community, which has data but lacks the methodological sophistication to understand and analyze it fully and meaningfully in accordance with scientific standards in the context of rigorous peer review.

16. Thus, the insularity of the intelligence community, and the fact that it has failed to incorporate scientific methods and expertise from the academic community (discussed below), undermine the accuracy of the assessments the intelligence community makes.

17. The little we currently know makes clear that a decision to engage in political violence is context-specific and particular to any given individual, which makes it very difficult to identify indicators that could be used to predict whether an individual will actually commit an act of political violence. I have sought through my own work for government agencies, in particular the Air Force Research Laboratory, to identify factors that might lead a person to turn to political violence, as well as any behavioral indicators of that process that are specific enough to help in the effective detection and prevention of terrorist threats. In that exploratory study, I looked at over 300 subjects who had carried out political violence in France and England from

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1994 to 2006, using trial transcripts as my main source of information about them (this amounted to almost 20 trials in both countries). My research compared these individuals ("terrorists" in the *Guidance* terminology) with a meaningful control group, namely their peers, who were suspected of becoming politically violent but did not, in fact, do so. My research concluded that aside from a narrow band of behaviors in the immediate day or two before a violent act is committed—acquisition of explosives, for instance—behavioral indicators cannot reliably be used to predict whether an individual will carry out an act of terrorism.

18. Ultimately, to my knowledge, no one inside or outside the government has yet devised a "profile" or model that can, with any accuracy and reliability, predict the likelihood that a given individual will commit an act of terrorism.

Relevant Methodology and Likelihood of Error

Methodological biases and heuristics

19. Messrs. Grigg and Steinbach, and the *Guidance*, describe generally the process for reviewing nominations to the TSDB or the No Fly List, but they gloss over the actual decision-making process that leads to the nominations themselves. That process is internal to the nominating agencies and, according to Mr. Grigg, consists of "an assessment based on analysis of available intelligence and investigative information that the person meets the applicable criteria for inclusion." (Grigg Declaration, ¶ 15.) These assessments—what Mr. Steinbach calls "preventive measures" and the government in its briefing calls "predictive judgments"—are predictions "about conduct that may or may not occur in the future." (Defendants' Consolidated Memorandum at 47.)

20. While predicting human behavior is never an exact exercise, scientists and practitioners from numerous disciplines have devised methods that, depending on their rigor,

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allow for prediction *with an estimated rate of error*. Such a rate of error is important to calculate because it constitutes a rough indicator of the validity and reliability of the predictive tool and enables better decision making about the appropriate consequences of the predictions. However, there is no indication that the government has assessed the scientific validity and reliability of its predictive judgments or the information that leads to those judgments, nor has it used a scientifically valid model for predicting, and accounting for, the rate of error that might arise from those predictive judgments. Due to these failures alone, the government's predictive judgments cannot be considered reliable. Absent a scientifically validated process for attempting to make predictive judgments, those judgments amount to little more than the "guesses" or "hunches" that Mr. Grigg says are not sufficient to meet the criteria. (*See* Grigg Declaration, ¶ 15.)

21. I have observed a repeated failure within the government to employ basic scientific principles, such as the use of a control group, to test the specificity and validity of terrorism-related measures. In the No Fly List prediction context, any attempt to assess the validity of indicators or factors that might lead an individual to commit political violence would require a study including both (a) individuals who actually carried out acts of political violence, and (b) individuals (the control group) who are similar to the first set in all respects except that they did not engage in violence. Use of a control group is critically important because it is only by a comparison with this control group, in which the indicator of actual violence is *absent*, that one can make the argument that other indicators specific to the subject group are valid. In short, a control group helps to lower the probability of generating a false positive, that is, falsely identifying someone as a future terrorist when he is not. To my knowledge, the intelligence community has not used control groups in making predictive judgments about a propensity (or

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lack thereof) to commit political violence. There is no indication that the government has included control groups in making predictions about individuals placed on the No Fly List.

22. More fundamentally, the government's predictive judgments are necessarily unreliable, and the risk of error associated with them is extremely high, because the events they attempt to predict—violent acts of terrorism—are exceedingly rare. To explain why this is important, we must turn to basic methods for assessing conditional probability. Bayes' Theorem (named for the eighteenth-century English statistician Thomas Bayes) is one of the most commonly used such methods. In short, Bayes' Theorem describes the probability of an event based on conditions that might be related to the event. For example, if we establish that rain and humidity are related, the theorem could be used to calculate the likelihood of rain given a particular level of humidity.

23. Critical to Bayes' Theorem and any exercise in conditional prediction—and to the errors that predictions often entail—is the base rate of the phenomenon in question: in essence, the relative frequency of some event or outcome in some general population of events. If one out of every 100 people in the United States is a student, the base rate for students is one percent. Establishing the base rate of a phenomenon is critical to any attempt to predict whether the phenomenon will occur.

24. Even though it is critically important to establish a base rate for any predictive model, it is very common for people not trained in scientific methods to disregard the base rate, resulting in judgment errors. That is because in the ordinary course of making lay judgments about likely or unlikely events, it is counter-intuitive for lay people to start with a base rate. To ignore the base rate is a common flaw in reasoning known as "base rate neglect." An example of the importance of the base rate in making an assessment—and why establishing a base rate can

be counter-intuitive—is illustrated in a classic problem posed by Daniel Kahneman and Amos Tversky, psychologists who specialized in prediction and probability judgment, and whose work won a Nobel Prize. "A cab was involved in a hit and run accident at night. Two cab companies. the Green and the Blue, operate in the city... 85% of the cabs in the city are Green and 15% are Blue. A witness identified the cab as Blue. The court tested the reliability of the witness under the same circumstances that existed on the night of the accident and concluded that the witness correctly identified each one of the two colors 80 percent of the time and failed 20 percent of the time. What is the probability that the cab involved in the accident was Blue rather than Green?" Most people to whom Kahneman and Tversky posed this problem answered 80 percent, which was the tested accuracy of the witness. However, the correct answer is actually 41 percent. This can be determined by a simple calculation using Bayes' Theorem: what is the probability that a cab is actually Blue given the condition that the witness said it was Blue? Given the witness's 80 percent accuracy rate, he would correctly identify 12 of the Blue cabs (out of 15) and 68 of the Green cabs (out of 85), but he would misidentify 17(85-68) Green cabs as Blue. So, the probability that a cab involved in the accident was Blue rather than Green is the proportion the witness correctly identified as Blue (12) over the total number he identified as Blue (12 + 17 or 29), which is only 12/29 or about 41 percent—the correct answer. Thus, taking into account the different base rates of the cabs is critical to determining that the hit-and-run cab is more likely to be Green than Blue despite the witness's generally accurate identification of the colors, because the base rate of Green cabs (85 percent) is greater than the witness's accuracy (80 percent). (See Kahneman, Slovic & Tversky, 1982: Judgment under Uncertainty: Heuristics and Biases, 156-57.)

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25. This is one example of what Kahneman and Tversky call "heuristics [cognitive shortcuts] and biases," which lead people to make predictable errors when assessing the likelihood of future events based on current information. Developments in cognitive science have revealed that such biases and heuristics underlie many seemingly intuitive, but nevertheless logically flawed, thought processes.⁵ The assessments of nominators and TSC subject matter experts involved in nominating and reviewing nominations to the No Fly List are likely to be full of such heuristics and biases, given that there is no indication in the declarations of Messrs. Grigg and Steinbach, or the *Guidance*, that they are taken into account, or that the relevant personnel are even aware of them.

26. Also important to the validity of a conditional prediction are the sensitivity and specificity of the indicators used to make the prediction. I will discuss these concepts by using a medical example because such indicators or tests are easily understood when we think about physicians making diagnoses. The *sensitivity* of an indicator is the ratio of the number of true positives (for instance, people who are actually sick and are correctly diagnosed as sick) over the number of true positives plus the number of false negatives (or, the total number of actually sick people, correctly diagnosed or not). The *specificity* of an indicator is the ratio of the number of true negatives (people who are actually healthy and are correctly identified as healthy) over the number of true negatives plus the number of false positives (or, the total number of healthy individuals, correctly diagnosed or not). A predictive tool that is highly sensitive—i.e., one that

⁵ See the Nobel Prize winning work done by Daniel Kahneman and Amos Tversky. See Daniel Kahneman, Paul Slovic & Amos Tversky, eds., 1982, Judgment under Uncertainty: Heuristics and biases, Cambridge: Cambridge University Press; Daniel Kahneman & Amos Tversky, 2000, *Choices, Values and Frames*, Cambridge: Cambridge University Press; Thomas Gilovich, Dale Griffin & Daniel Kahneman, 2002, *Heuristics and Biases: The Psychology of Intuitive Judgment*, Cambridge: Cambridge University Press, See also Daniel Kahneman's best seller, 2011, *Thinking, Fast and Slow*, New York: Farrar, Straus and Giroux.

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is highly accurate in identifying people who are actually sick—may nonetheless be of little value if it also has low specificity—i.e., it also identifies many healthy people as sick, resulting in numerous false positives.

27. Now, to illustrate how these concepts work together, and how base rate neglect can easily skew predictions, let's imagine that the government has developed a tool to identify potential terrorists based on "derogatory information." Let's further imagine that the particular derogatory information is 100 percent sensitive, meaning it is associated with, and can be used to catch, all potential terrorists who will actually carry out violent acts. However, let's also imagine that the tool is only near-perfect in terms of specificity, 99 percent perfect, meaning it would lead to one error—i.e., one false positive—in 100 predictions (to be clear, such near-perfect accuracy is basically unheard of in the social sciences).

28. Given such a hypothetical, near-perfect tool to assess the probability of a person committing a violent terrorist act, what is the rate of error of this instrument? The actual rate of error depends on the base rate of terrorists in the population. Let's assume a total population of a million people, in which there are 100 terrorists (for a base rate of 1/10,000). The predictive tool would identify all 100 terrorists, for 100 percent sensitivity. However, because it is only 99 percent specific, it would make one error in every one hundred evaluations and falsely identify another 10,000 people as terrorists. Despite the fact that this instrument is near "perfect," the probability that a person is a terrorist, given that she has been identified as such by this instrument, is less than 1 percent. (100 correctly identified terrorists divided by the total population identified as terrorists by this instrument [100 + 10,000 or 10,100], or 100 divided by 10,100, which is a little less than 1 percent.)

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29. What this example illustrates is that the lower the base rate of actual terrorists, the greater the error—or, in other words, the rate of error is inversely proportional to the base rate. For instance, if we modify this hypothetical so that there is only 1 terrorist in one million people, the probability that a person identified as a terrorist using this tool is actually a terrorist decreases to about 0.01 percent. (The lone terrorist is correctly identified by the instrument which also incorrectly identifies 10,000 as terrorists. The probability of a person on the list being a terrorist is therefore 1 divided by 10,001 or about 0.01 percent.)

30. The reason that the tool is so misleading, despite the fact that it is near-"perfect," is because there are so many more non-terrorists than terrorists in the population. In this way, base rate neglect—not taking the base rate of a phenomenon in a general population into account—can lead to an enormous number of false positives for rare events.

Validity of No Fly List predictive judgments

31. The foregoing discussion makes clear the overriding importance of taking into account the base rate of a phenomenon, and the sensitivity and specificity of indicators used to predict that phenomenon, when attempting to make predictions based on current information. However, I am not aware of anyone within the government who has applied these principles in terrorism-related assessments, and there is no indication that the government has attempted to apply them to the predictive judgments underlying placement on the No Fly List. As explained above, that failure alone renders the government's predictive judgments unreliable.

32. It is nonetheless possible to arrive at some additional, general conclusions about the validity of No Fly List assessments based on available information. The relevant base rate for the purposes of the No Fly List is the base rate of the events that the government is trying to predict under the No Fly List criteria: future acts of violent terrorism.

33. By any measure, the base rate of violent terrorist attacks is extremely low. Unfortunately, databases that purport to compile data on terrorist threats to the United States are unreliable and flawed because most include incidents involving sting operations, where, but for the intervention of the FBI, there was no real threat to the United States because the suspect lacked the capability to carry out a terrorist act. The databases therefore greatly overinflate the actual threat. For the sole purpose of illustrating my point, however, I will use one of the most popular of these flawed databases, the Global Terrorism Database, which lists 120 terrorismrelated incidents in the United States for the entire ten-year period from 2004 through 2014.⁶ That figure includes numerous anti-government, racist, and anti-immigrant attacks. It is unclear whether the No Fly List includes people known or suspected of engaging in of all of these kinds of political violence, or whether it focuses more or less on particular kinds of political violence or terrorism (which would impact the base rate). I note that all the plaintiffs in this case appear to be Muslims. It is worth noting that the number of Muslim neo-jihadi⁷ extremist attacks carried out by U.S. persons during that ten-year period was far lower than the number of other kinds of politically-motivated attacks, so the base rate for Muslim neo-jihadi violence is far lower than the rate for all terrorism-related incidents, and the number of attacks involving aircraft or airports was lower still-the database lists just three such incidents.

34. Nevertheless, even if we use this inflated number of terrorism-related incidents, it yields a base rate of 120 terrorists in 10 years in a country of about 330 million people, which

⁶ <u>http://www.start.umd.edu/gtd/search/</u>. The 120 terrorism-related incidents figure is based on the following search terms: under the "when" tab, I inputted the dates January 1, 2004 to December 31, 2014, under the "Country" tab I selected the United States, and Under the "Terrorism Criteria" tab, I checked "Yes, Require Criterion 1 to be met," "Exclude Ambiguous Cases," and "Include Unsuccessful Attacks." ⁷ This is my terminology to denote violent acts conducted by the perpetrators against Western targets out of a sense of religious obligation in the name of jihad. I call it neo-jihad because the vast majority of Muslims all over the world would reject this fight as a jihad under Islam.

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amounts to 1 terrorist per 27.5 million people per year, or in a more standard rate, 0.0036 per 100,000 per year.⁸ With such a low base rate, a tool used to predict who will commit acts of terrorism would have to be extremely accurate, especially in terms of specificity, for the government agencies not to be flooded with false positives or false alarms in attempting to identify terrorists.

35. I can say with confidence that the No Fly List assessments are not remotely accurate enough to guard against an extremely high risk of error. Regarding the sensitivity of the No Fly List assessments—the percentage of true terrorists they identify (or the degree of "false negatives")—it's safe to say that the No Fly List does not achieve anything close to the 100 percent sensitivity in the example above. Available information about the very few individuals who attempted to, or in fact did, carry out terrorist attacks indicates that they had not previously been placed on the No Fly List. Those include Umar Farouk Abdulmutallab, the December 2010 "underwear bomber," despite the fact that his father denounced him to U.S. authorities, and more recently Tamerlan Tsarnaev, the senior Boston Marathon bomber, who flew back to the United States despite having been interviewed as a terrorist suspect by the FBI prior to his trip.

36. As for the specificity of the assessments leading to inclusion on the No Fly List the correct identification of non-terrorists, or, conversely, the number of "false positives"—we can again say with confidence that the List cannot achieve anything close to the kind of nearperfect specificity that would be required in order to minimize the number of false positives. As

⁸ To appreciate how low this base rate of terrorists is, compare it to the corresponding U.S. rates for homicides and suicides, which themselves are exceedingly rare events. The 2013 U.S. homicide rate was 4.5 per 100,000 while the 2013 suicide rate was 12.6 per 100,000. *Crime in the United States 2013*, FBI. https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/violent-crime/murder-topic-page/murdermain_final; Centers for Disease Control and Prevention, *QuickStats: Age-Adjusted Rates for Suicide, by Urbanization of County of Residence — United States, 2004 and 2013*, Morbidity and Mortality Weekly Report (MMWR), (April 17, 2015), http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6414a9.htm. In other words, the homicide rate is about 1,250 times greater and the suicide rate is 3,500 times greater than the terrorism base rate in the United States.

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explained above, no valid profile exists for predicting who will engage in political violence, so any purported "indicators," alone or in combination, of future terrorist violence even about a week prior to a terrorist attack will necessarily lack specificity. It is a bit like the weather: scientists are better at accurately predicting the weather the closer the prediction is to the event. Moreover, in order to evaluate the specificity of an indicator, one needs to compile a control group—such as a database of individuals who are not terrorists but who nonetheless share the indicators, or "derogatory information," that the government associates with terrorists. That is because specificity measures the proportion of non-terrorists who are correctly identified as such. To my knowledge, except for my own work for the Air Force mentioned above, the government has never done this. In other words, the government has not tested the validity of any of its indicators, or derogatory information, and does not know the rate of error resulting from them.

37. Another reason for the low specificity of No Fly List assessments is that, as Mr. Grigg states, the standard for inclusion on the No Fly List is "reasonable suspicion" (Grigg Declaration \P 16), a low threshold that, under the government's definition, requires that nominators have an articulable, objective reason to suspect that a person meets the No Fly List criteria. The "reasonable suspicion" standard does not even require the nominator (or the reviewer) to assess that it is more probable than not that the individual meets the criteria. That means individuals can be placed on the No Fly List if nominators think they *might* meet the criteria, even if the nominators think they *probably do not*. If nominators are adhering to the "reasonable suspicion" standard—and I have no reason to believe that they do not—it virtually guarantees that the specificity of No Fly List assessments will be quite low, and that numerous false positives will result.

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38. In arriving at my conclusions, I have taken into account that the government's predictions nominating individuals to the No Fly List are based on "available intelligence and investigative information" and "additional heightened derogatory requirements." (*See* Grigg Declaration, ¶ 15, 18; Steinbach Declaration, ¶¶ 9, 11.) I have further taken into account that government experts undergo training and course work before their designation as subject matter experts to review nomination for inclusion on the No Fly List. (*See* Grigg Declaration, ¶ 19). To my knowledge, nominators' determinations and their training do not include critically important instruction in conditional probability analysis and science-based safeguards against error. The inevitable result is base rate neglect in their assessments and a high number of false positives.

39. Ultimately, because of the lack of a control group for valid prediction, the extremely low base rate of violent terrorist acts, and the lack of specificity for indicators of political violence, the rate of error for inclusion on the No Fly List will necessarily be very high.

Cognitive Errors and Structural Problems Within the Intelligence Community

40. Another problem with "predictive judgments" that lead to placement on the No Fly List is one I call "categorization cognitive errors."

41. As I discussed above, it is now widely accepted in the field of terrorism research that becoming a terrorist at a given time is a process, and that most people could engage in political violence if driven to do so. One's potential to become politically violent is contextual and not dependent on personal predisposition (or personal indicators of violence). There is a window of circumstances and opportunities during which someone will engage in what are called acts of terrorism and a much larger period of time when he or she will not. The desire to commit terrorist acts is therefore dependent on a fluid mixture of personal experiences and environmental factors, which are constantly changing.

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42. Similarly, my experience within the government and in the terrorism research community has led me to conclude that labeling an individual as a terrorist takes on a kind of cognitive inertia. Psychological research shows that once we label a person in a particular way, and others accept the label, it acquires a power of its own and frames the way we think about that person. Removing that label becomes difficult; it requires much effort because it becomes the default conception about the person. Applied in the No Fly List context, this inertia would only exacerbate the failure to appreciate changing contextual circumstances.

43. I also have observed firsthand how incentives affecting individuals in the intelligence community—of which I was part and whose individual good intentions I do not doubt— encourage the reporting of threats but discourage the reporting of information inconsistent with those threats. Politicians and policy makers—and indeed all of us— understandably want to prevent violence and protect the American population. But in pursuing this understandable goal, they have created an environment that demands near-total elimination of the threat of terrorism.⁹ The difficulty with this understandable political goal is that it is an impossible scientific or law enforcement standard to achieve and results in a system of incentives that encourages the generation of false positives.

44. In my half-dozen years monitoring the daily threat traffic in various capacities within the government, I noted that derogatory information usually flooded the threat matrix, while retraction or correction of such derogatory information was relatively rare by comparison. Indeed, the imperatives working within the intelligence system encourage reporting derogatory information on U.S. persons but discourage reporting disconfirming information. Searching for disconfirming evidence—trying to prove oneself wrong and, failing that, temporarily adopting a

⁹ This is reminiscent of the "tough on crime" policies for the past forty years, which nearly all agree have resulted in mass incarceration.

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given hypothesis—is the essence of the scientific process, but I have seen few indications that intelligence analysts consistently search for disconfirming evidence.

45. In my experience, these incentive structures operated with respect to the FBI. FBI special agents are promoted and rewarded—even with monetary bonuses—based on providing derogatory information on U.S. persons, while admission of error or new information that exonerates someone from suspicion tends not to be rewarded.¹⁰ In other words, the incentive in the system is to report suspicious activity but not correct the information when it turns out to have been a false alarm. My experience with the FBI in the investigation of terrorist suspects in the United States is that the FBI is very reluctant to close a case. In effect, it employs a low threshold for opening a preliminary field investigation but employs a high standard for closing a case or recommending deletion from a watchlist. Again, these impulses and incentives may be understandable, but the result is that many false positives are never corrected, which, combined with the presumption of static predisposition to violence, contributes to a high error rate when attempting to predict political violence.

Conclusions

46. The "assessments" or "predictive judgments" by intelligence community analysts or subject matter experts that lead to inclusion on the No Fly List are judgments as to whether someone has a high probability of turning to political violence. There is no indication, however, that the government has incorporated conditional probability principles and analysis into No Fly List assessments—a failure that dramatically undermines the validity and potential accuracy of those assessments. Nor is there any indication that the government has tested the validity of any of its indicators, or derogatory information, and the government therefore does not know the rate

¹⁰ From the *Guidance*, it is clear that the provision of information that could result in the removal of a U.S. person erroneously put on the No Fly rests on the originator, usually an FBI special agent.

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of error resulting from their use. In other words, the government does not know the validity, sensitivity, specificity, and base rates of various purported behavioral indicators that people will engage in political violence.

47. To my knowledge, there is no model in or outside of government that predicts political violence with any reasonable degree of sensitivity (that is, without producing a high rate of "false negatives"). I did not see any such model during my time working in the intelligence community. The fact that the very few individuals who attempted to, or in fact did, engage in political violence in the last several years were not placed by the government on the No Fly List further supports my conclusion that no such model exists.

48. Government analysis suffers from the problem of low base rate neglect, which leads it to overestimate the probability of terrorism and terrorists and underestimate the number of false positives. Given the extremely low base rate of violent terrorist attacks, the phenomenon of base rate neglect, and the lack of specificity for indicators of a turn to political violence, the process of nomination to the No Fly List is inherently error prone, entailing an extremely high risk of error.

49. Cognitive and structural errors within the intelligence community further render the process of placing an individual on the No Fly List even more error-prone. The government's approach fails to account adequately for the contextual nature of political violence and the inertia associated with labeling an individual as a terrorist. An alarmist bias may be understandable at a human level in our current policy and media environment, but the reality is that when this bias is coupled with strong incentives within the intelligence and law enforcement community to provide "derogatory information"—but not to challenge it or search for disconfirming evidence—it is even harder for government officials to challenge a nomination. This further increases the already high likelihood of error in the government's No Fly List assessments.

50. I declare under penalty of perjury that the foregoing is a true and correct statement of my opinions and the supporting facts.

Executed this 7th day of August, 2015.

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EDUCATION:

Harvard University, Cambridge, MA1973A.B.(Social Relations), Harvard CollegeNew York University,
1977New York, NY1977M.A.(Sociology), Graduate School of Arts and Sciences1979M.D.(Medicine), School of Medicine1982Ph.D.(Sociology), Graduate School of Arts and Sciences

PROFESSIONAL QUALIFICATIONS AND ASSOCIATIONS:

Unrestricted Medical License – Maryland, New Jersey, New York and Pennsylvania Diplomate, American Board of Psychiatry and Neurology (1996) Diplomate, American Board of Forensic Psychiatry (1998) American Academy of Psychiatry and the Law American Psychiatric Association (Fellow) College of Physicians of Philadelphia (Fellow) Center for Strategic and International Studies (Senior Advisor) George Washington University Homeland Security Policy Institute (Senior Fellow)

AREAS OF SPECIAL EXPERTISE:

<u>Political Science</u>: Terrorism, Political Violence, Middle East, South Asia, Europe <u>Sociology</u>: Large Scale Organizations, Political Sociology, Sociology of Work <u>Psychiatry</u>: Forensic psychiatry, problems of intercultural adaptation, social psychology and psychology of trauma and perpetrators.

PROFESSIONAL EXPERIENCE:

Consultant

2003-present Principal and founder, Sageman Consulting, LLC Consulting with various U.S. government agencies, including the National Security Council, DHS, FBI, Department of Justice, Department of State, many branches of Department of Defense and the intelligence community, Sandia National Laboratories, and over twenty foreign governments

U.S. Army

2010-2013	Special Adviser to the Deputy Chief of Staff of the Army
	(Intelligence) on the Insider Threat

2012-2013 Special Adviser to the Deputy Chief of Staff of the International Security Assistance Forces (Intelligence) in Afghanistan on Insider Attacks

New York Police Department

2008-9 Scholar-in-Residence

RTI International

2007-9 Consultant on political violence

ARTIS Research and Risk Modeling

2006-13 Director of Research

U.S. Secret Service

2006-7 Consultant at the National Threat Assessment Center on terrorism <u>Private practice of psychiatry</u>

1994-present Forensic psychiatry, including trial expert testimony (about 30) Hospital of the University of Pennsylvania

1992-95Residency in Psychiatry

1991-92 Internship (Medicine)

New York University Medical Center

1979-81 Residency in Anatomic Pathology

GOVERNMENT EXPERIENCE:

United States Navy (retired as Commander)
1981-84	Flight Surgeon, with tours in Pensacola, Florida; MCAS Futemna,
	Okinawa; and NADC in Warminster, Pennsylvania
Central Intelligence	Agency
1984-91	Case Officer, with tours in Washington, DC; Afghan Task force;
	Islamabad, Pakistan; and New Delhi, India

TEACHING AND RESEARCH EXPERIENCE:

Columbia University, School of International and Public Affairs, New York, New York		
2008-2009	Adjunct Associate Professor	
University of Pennsylvania, Philadelphia, PA		
2003-2007	Clinical Assistant Professor, Department of Psychiatry	
1998-2005	Faculty member, Solomon Asch Center for the Study of Ethno-	
	political Conflict & lecturer, Department of Psychology	
1991-1995	Clinical assistant	
1995-1997	Clinical associate, teaching medical students, psychiatric residents	
	and law students	
New York University School of Medicine, New York, New York		
1979-1981	Clinical assistant	

Institute for Cancer Research, Fox Chase, PA1972Research Assistant in BiochemistryHarvard University,Cambridge, MA1971-1973Teaching Assistant in Physics

Semester long courses

Forensic Psychiatry (year long graduate seminar for senior resident physicians) Law and Psychology (graduate seminar) Psychology of Genocide Psychology of Trauma Moral Psychology of Holocaust Perpetrators Social Psychology of Terrorism Urban Terrorism

Invited lectures on terrorism delivered at Harvard University, University of Chicago, University of Maryland, University of Michigan, University of Pennsylvania, Syracuse University, University of California at Berkeley, Northwestern University, University of Arizona, Principia College, U.S. Naval Academy, Johns Hopkins University, George Washington University, American University, Massachusetts Institute of Technology, University of Southern California, National Defense University, Naval Postgraduate School at Monterey and various universities in Germany, England, Canada, Netherlands, France, Italy, Singapore, Belgium, Turkey, Denmark, Switzerland, Austria, Malta, Ireland, Saudi Arabia, Spain, Russia, Israel, Iraq and Australia

Invited presentations at numerous professional meetings Testimony before the 9/11 Commission, Washington, D.C., 2003 Testimony before the Beslan Commission, Moscow, Russia, 2005

HONORS:

1970-73	Harvard National Scholar
1973-79	MD-PhD Medical Scientist Training Fellow
1993-94	Sol Ginsburg Fellow (Group for the Advancement of Psychiatry)
1997-01	Trustee, The Balch Institute for Ethnic Studies
1999	Fellow, The College of Physicians of Philadelphia
2002	Councilor, The Historical Society of Pennsylvania
2003	Fellow, the American Psychiatric Association
2004	Senior Fellow, Foreign Policy Research Institute
2005	Senior Advisor, Center for Strategic and International Studies
2008	Senior Fellow, Homeland Security Policy Institute, George
	Washington University
2008	Adjunct Fellow, Combating Terrorism Center, U.S. Military
	Academy, West Point

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2011	Expert testimony for the defense in U.S. v. Mehanna, Case No. 1:09-cr-10017- GAO-1, Federal District Court for the District of Massachusetts
2013	Expert testimony for the defense in U.S. v. Mohamud, Case No. 3:10-cr-00475- KI-1, Federal District Court for the District of Oregon
2013	Expert written testimony for the defense in U.S. v. Bary, Case No. 1:98-cr-01023-LAK-17, Federal District Court for the Southern District of New York
2014	Expert written testimony for the defense in U.S. v. Ahmad, Case No. 3:04-cr-00301-JCH-1, Federal District Court for the District of Connecticut
2014	Expert testimony for the defense in U.S. v. Kabir, Case No. 5:12-cr-00092-VAP, Federal District Court for the Central District of California
2015	Expert testimony for the defense in U.S. v. Kurbanov, Case No. 1:13-cr-00120- EJL-1, Federal District Court for the District of Idaho
2015	Expert testimony for the defense in U.S. v. Hamidullin, Case No. 3:14-cr-00140- HEH-1, Federal District Court for the Eastern District of Virginia

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing declaration of Marc Sageman in opposition to Defendants' cross-motion for summary judgment was delivered to all counsel of record via the Court's ECF notification system.

> _<u>s/ Hina Shamsi</u>_____ Hina Shamsi