## CHAPTER SEVEN CONCLUSION

The FBI Laboratory's misidentification of Brandon Mayfield as the source of Latent Fingerprint 17 (LFP 17) found on a bag with detonators connected to the Madrid training bombings triggered an intensive investigation that ultimately led to Mayfield's arrest and incarceration for two weeks on a material witness warrant. The investigation included covert electronic surveillance and searches of his home and office pursuant to FISA, and searches of his home and office pursuant to criminal search warrants after his arrest. The FBI withdrew its identification after the Spanish National Police (SNP) identified the fingerprint on the Madrid bag as belonging to an Algerian national.

The misidentification of LFP 17 was a watershed event for the FBI Laboratory, which has described latent fingerprint identification as the "gold standard for forensic science." Many latent fingerprint examiners have previously claimed absolute certainty for their identifications and a zero error rate for their discipline.

Because of the significance of the FBI's misidentification and the consequences to Mayfield, the OIG conducted an extensive investigation, assisted by fingerprint experts, which examined the causes of the Laboratory's error, assessed the actions taken by the Laboratory to respond to the misidentification and improve its fingerprint examinations, and recommended additional changes to Laboratory procedures. We also closely examined the conduct of the FBI's field investigation of Mayfield.

Based on our investigation, we concluded that the three FBI examiners who misidentified Mayfield's print were confused by the fact that the fingerprint on the Madrid bag (LFP 17) contained as many as 10 points that corresponded to details in Mayfield's known fingerprints in relative location, orientation, and intervening ridge count. This degree of similarity is extraordinarily rare and confused three FBI fingerprint examiners as well as a fourth outside, courtappointed examiner.

However, we also found that the FBI examiners committed errors in the examination procedure, and that they could have prevented the misidentification through a more rigorous application of several accepted principles of latent fingerprint identification. Among other things, the examiners applied circular reasoning, allowing details visible in Mayfield's known prints to suggest features in the murky or ambiguous details of LFP 17 that were not really there. The examiners also relied on selected Level 3 details to support the identification under circumstances that should have called into question the validity of these purported similarities. They also accepted a

"double touch" explanation for an obvious difference in appearance between LFP 17 and Mayfield's known print that had insufficient evidentiary support and assumed a remarkable set of coincidences in order to make the identification.

In addition, the Laboratory missed an opportunity to correct its error when it learned in mid-April 2004, that the SNP Laboratory had declared that its comparison of Mayfield's prints to LFP 17 was "negative." Instead, the FBI examiners declared that they were "absolutely confident" in their identification even before determining the basis of the SNP's disagreement. We concluded that the FBI Laboratory's overconfidence in its examiners prevented it from taking the SNP's results as seriously as it should have.

We also assessed whether Mayfield's religion improperly influenced the FBI Laboratory's actions. We determined that Mayfield's religion and background were unknown to the examiners when they made the initial fingerprint identification of Mayfield. After the initial identification, information about Mayfield's representation of a convicted terrorist, his contacts with other suspected Muslim extremists, and his religion became known to the examiners. The OIG concluded that Mayfield's religion was not the sole or primary cause of the FBI's failure to question the original misidentification and catch its error. The primary factors were the similarity of the prints and the Laboratory's overconfidence in the superiority of its examiners. However, we believe that Mayfield's representation of a convicted terrorist and other facts developed during the field investigation, including his Muslim religion, also likely contributed to the examiners' failure to sufficiently reconsider the identification after legitimate questions about it were raised.

We also found that some of the explanations offered by the FBI Laboratory after the misidentification was discovered were not supported by the evidence. For example, contrary to the FBI's initial claims, the error was not caused by the use of a digital image of LFP 17, and we do not believe that the FBI Laboratory necessarily would have avoided the error had it obtained access to the original evidence.

In response to the misidentification, the FBI Laboratory has taken various actions to determine if other similar errors had occurred in other cases, and to develop new criteria and procedures for latent fingerprint identification. Among other things, the FBI Laboratory has undertaken an ambitious research project to develop more objective and accurate criteria for declaring fingerprint identifications. The Laboratory has also announced that it will: (1) develop new and more detailed Standard Operating Procedures specifying in detail each step of the examination process, (2) adopt extensive documentation requirements to ensure thorough and meticulous comparisons with reproducible results, and (3) implement blind verification procedures with

decoy non-matches to promote complete and independent verifications. These reforms will require dramatic changes in the way latent fingerprint identifications are performed in the FBI Laboratory and likely in other forensic laboratories as well. We believe that these actions will improve the quality of latent fingerprint examinations and help prevent future misidentifications.

However, we found that some of the changes adopted by the Laboratory were not fully responsive to the issues raised by the Mayfield misidentification. and that additional or more specific modifications to Laboratory practices should be adopted. In this report, we offer a series of recommendations for procedural changes to help address the problems we found in this case. They include recommendations for: (1) developing criteria for the use of Level 3 details to support identifications, (2) clarifying the "one discrepancy rule" to assure that it is applied in a manner consistent with the level of certainty claimed for latent fingerprint identifications, (3) requiring documentation of features observed in the latent fingerprint before the comparison phase to help prevent circular reasoning, (4) adopting alternate procedures for blind verifications, (5) reviewing prior cases in which the identification of a criminal suspect was made on the basis of only one latent fingerprint searched through the FBI's Integrated Automated Fingerprint Identification System (IAFIS), and (6) requiring more meaningful and independent documentation of the causes of errors as part of the Laboratory's corrective action procedures.

The OIG also reviewed the conduct of the FBI in the investigation and arrest of Mayfield, after the FBI Laboratory had declared that his fingerprint was on the Madrid evidence. Among other things, we considered the impact of the Patriot Act on the Mayfield investigation. We found that the Patriot Act amendments to FISA did not affect either the government's decision to seek FISA search and surveillance authority in the Mayfield case, or the scope of information the government collected about Mayfield pursuant to FISA. We also found that, contrary to public speculation after Mayfield's arrest, the FBI did not make use of the provisions of the Patriot Act relating to delayed notification searches in the Mayfield case. Moreover, the evidence indicated that, even prior to the Patriot Act, the FBI likely would have sought and been able to obtain FISA authorization for the searches and surveillance of Mayfield that it conducted.

We did not find any evidence that the FBI misused any of the provisions of the Patriot Act in conducting its investigation of Mayfield. The Patriot Act did permit a wider variety of law enforcement agents and intelligence agents to share information about Mayfield than would have been permitted prior to the Patriot Act. This difference amplified the consequences of the FBI's fingerprint misidentification by permitting information obtained in the investigation of Mayfield to be disseminated more broadly than would have been permitted prior to the Patriot Act amendments.

We also investigated whether the FBI's field investigation and arrest of Mayfield were improperly influenced by knowledge of his religion. Some government witnesses acknowledged that Mayfield's religion was a factor in the investigation. However, we concluded that investigation and arrest were driven primarily by the erroneous fingerprint identification, and that the same investigatory tools would have been employed regardless of Mayfield's religion.

In our investigation, we reviewed the affidavits submitted by the FBI in support of the application for a material witness warrant and criminal search warrants and found problems with them. The affidavits contained several inaccuracies that reflected regrettable lack of attention to detail. In addition, we found the wording of the affidavits to be troubling in several respects. In particular, the affidavits provided an ambiguous description of the April 21 meeting between the FBI and the SNP, which apparently lead the judge to erroneously conclude that the SNP had agreed with the FBI's identification. In fact, the SNP had only agreed to conduct a reexamination of LFP 17. In addition, the material witness warrant affidavit contained an unfounded inference concerning the likelihood of false travel documents regard Mayfield.

Finally, we examined the conditions under which Mayfield was confined at the Multnomah County Detention Center (MCDC). The material witness statute provides that the same detention procedures applicable to criminal defendants are also applicable to material witnesses under arrest. Mayfield's detention did not violate these procedures. We also found no evidence that Mayfield was mistreated during his detention. He was treated in accordance with the normal practices in this facility and was segregated from other prisoners for his own protection to a greater degree than an ordinary criminal defendant might have been. However, we found that the MCDC failed to communicate important information about Mayfield to appropriate personnel, resulting in unnecessary confrontations with Mayfield by a corrections officer and the inadvertent public disclosure of the alias assigned to him to protect grand jury secrecy.

As a result of our investigation, we provided a series of recommendations to the FBI to address problems we found in the Mayfield case. While we did not find any intentional misconduct by FBI employees, either in the Laboratory or by those conducting the FBI field investigation, we did find performance issues by various FBI employees and we recommended that the FBI assess these deficiencies. More significantly, we found a series of systemic issues, particularly in the FBI Laboratory, which helped cause the errors in the Mayfield case. While the FBI Laboratory has taken significant steps to address these issues, we made a series of recommendations to the FBI to address additional issues raised by the Mayfield misidentification. We believe our

recommendations, if fully adopted, can help prevent similar errors in the future.