EXHIBIT A-3

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

KENNETH CAMPBELL et al.,

Plaintiffs,

v. : Case No. 1:99-cv-02979

NATIONAL RAILROAD PASSENGER CORPORATION,

Defendant.

Expert Report of Gregory Mitchell, Ph.D.

I. ASSIGNMENT, QUALIFICATIONS AND OTHER BACKGROUND INFORMATION

- 1. I have been asked by the law firm of Morgan Lewis & Bockius, LLP, on behalf of the National Railroad Passenger Corporation ("Amtrak"), to review the February 21, 2012 report submitted by Dr. Jay Finkelman ("Finkelman Report") and give my opinion on the scientific soundness of the methods employed and the conclusions reached by Dr. Finkelman.
- 2. As I explain in Part II below, Dr. Finkelman's opinions (a) lack a basis in adequate case-specific data, (b) were not the product of a reliable method, (c) ignore evidence of widespread differences in assessment practices, and (d) make assumptions that are contradicted by well-established findings from social science research.
- 3. I hold a Ph.D. in psychology and a J.D. from the University of California, Berkeley. I am a tenured professor at the University of Virginia, where I hold the Mortimer M. Caplin Professor of Law chair and am the Class of 1948 Professor of Scholarly Research in Law. My curriculum vitae, which is attached hereto as Exhibit A, lists my publications and other academic achievements and provides a detailed record of my educational and employment background.
- 4. I regularly teach classes and give presentations on social science research on intergroup bias and discrimination, I regularly conduct research on intergroup relations, discrimination, organizational checks on bias in personnel processes, and scientific methodology, and I regularly advise colleagues and students on scientific research design and methods.
- 5. I often serve as a referee for the National Science Foundation and for peer-reviewed social science journals such as *Group Processes and Intergroup Relations*, *Journal of Experimental Social Psychology*, *Law & Human Behavior*, *Law & Social Inquiry*, *Law & Society Review*, and *Social Justice Research*.
- 6. I have published numerous articles in both peer-reviewed social science journals and law reviews, including a number of articles on intergroup relations and discrimination. One of

my articles on the appropriate uses and limits of social scientific expert evidence in employment discrimination cases, which was written with my colleagues John Monahan and Laurens Walker (Monahan, Walker & Mitchell, 2008), was cited approvingly by the Supreme Court in its decision in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011).

- 7. Through my education, research, and experience, I am very familiar with the methods and norms of the social sciences and with social scientific research on intergroup bias and discrimination, organizational research on personnel assessment and diversity management, and scientific inference and expertise.
- 8. Within the last four years, I have given deposition or trial testimony as an expert in three matters: (a) Bridgewater v. Northrop Grumman Ship Systems, Inc., Civil Action No. 1:06-cv-00769 (U.S. District Court for the Southern District of Mississippi); (b) Bennett v. CSX Transportation, Inc., Case No. 5:2010-cv-00493 (U.S. District Court for the Eastern District of North Carolina); (c) Merill v. M.I.T.C.H. Charter School Tigard, Case No. 3;10-cv-00219 (U.S. District Court for the District of Oregon).
 - 9. My hourly rate in this case is \$600.
 - 10. In preparing this report, I relied on the case materials listed on Exhibit B.

II. OPINIONS

- A. Dr. Finkelman Did Not Base His Opinions on Proper and Adequate Data
- 11. Dr. Finkelman did not make any effort to ensure that he relied on proper and adequate data to support his opinions, and it is apparent that the data he used were not adequate to the task of determining what controls Amtrak had in place to check bias, to determine what assessment criteria were used, and how Amtrak's managers behaved across positions and locations during the proposed class period in light of the human resource ("HR") policies and

procedures in place. As a result, Dr. Finkelman's conclusions regarding Amtrak's HR processes and personnel decisions (Finkelman Report at 24) are scientifically unreliable.

- 12. First, Dr. Finkelman conducted no independent review of the case documents. Dr. Finkelman at best reviewed only a handful of deposition transcripts and did not interview any Plaintiffs (Finkelman Deposition at 12, 87, 111, 112, 123). He relied on declarations from putative class members assembled by Plaintiffs' counsel and deposition excerpts chosen and paraphrased by Plaintiffs' counsel (Finkelman Deposition at 12, 111, 112, 123). 1
- 13. All of the examples contained in Dr. Finkelman's report (Finkelman Report at 20-23) are just repackaged versions of the anecdotes chosen by Plaintiffs' counsel for the "Selection Roulette" document (Finkelman Deposition Exhibit 7). The fact that the case information that Dr. Finkelman relied on was found in a document tendentiously titled "Selection Roulette" (Finkelman Deposition at 129-130 & Exhibit 7) should have raised a red flag in his mind about the completeness and impartiality of that information. Yet Dr. Finkelman undertook no effort to confirm the accuracy or completeness of any of the information presented to him by Plaintiffs' counsel (Finkelman Deposition at 112, 123).
- 14. Dr. Finkelman would have done well to independently review the depositions summarized in the Selection Roulette document, because that document mischaracterizes and omits relevant information from the depositions. For instance, the Selection Roulette document characterizes James Allen as testifying that ratings of interview candidates' responses to questions were "purely subjective" (Finkelman Deposition, Exhibit 7, ¶ 16), but Mr. Allen

¹ This case involves multiple Amtrak locations and positions over a long period of time (Fourth Amended Complaint, ¶¶ 7-80, 82-90), with many employees and managers and thousands of personnel decisions implicated. The personnel decisions discussed in the declarations are anecdotal evidence and by their nature are limited to individual circumstances.

² Incidentally, the very title of this exhibit indicates that outcomes supposedly operated by chance rather than through some systematic process.

testified that his ratings followed the instructions and guidance provided in Amtrak's personnel forms and procedures for conducting assessments (Deposition of James Benton Allen at 52, 55).³ An example of information omitted from the Selection Roulette document is found in the summary of Bernard Campbell's deposition testimony, which omits the fact that Mr. Campbell testified to how HR staff were involved in candidate interviews and investigations of alleged misconduct, how interview panels were used as opposed to single decision-makers, how interviews and investigations were structured or guided by HR policies and forms, and how training was given for conducting investigations (Deposition of Bernard Lee Campbell at 22-24, 54-57). The Selection Roulette document is not an unbiased portrait of what the deponents said at their depositions, and it is not the kind of material a social scientist should uncritically rely on as the basis for opinions about an organization and its practices across time, positions and locations (see, e.g., Bridges & Nelson, 1999).

- 15. Second, Dr. Finkelman fails to make clear in his report that he found no fault with Amtrak's actual policies and that he found no evidence of Amtrak encouraging racial bias (Finkelman Deposition at 109-110, 126). At his deposition, Dr. Finkelman made clear that he means to criticize only the on-the-ground practices of Amtrak managers, not Amtrak's policies (Finkelman Deposition at 110-111). But again, Dr. Finkelman took no steps to ensure that he understood what was actually happening on the ground across time, positions, and locations.
- 16. Third, Dr. Finkelman considered just a small fraction of the case-specific information available to him: the Appendix listing the documents that Dr. Finkelman supposedly relied on lists only four depositions and 98 exhibits; I understand from counsel that over 130

³ Some of the summary in Selection Roulette appears to be based on responses by Mr. Allen to hypotheticals posed during the deposition as opposed to actual past practice (see, e.g., Deposition of James Allen at 55).

depositions of managers and other employees, including depositions of 37 declarants, have been taken and over 34,000 documents have been produced by Amtrak. As a result, Dr. Finkelman ignored many documents containing relevant data on how HR personnel judgments and decisions were made at Amtrak, including documents that Dr. Finkelman conceded at his deposition were likely to contain information pertinent to his opinions: (a) the deposition testimony of Karen Broadwater, the Director of Human Resources-West, and of Theodore M. Campbell, the EEO and compliance manager, even though Dr. Finkelman testified that he asked Plaintiffs' counsel for information from the persons most knowledgeable about HR processes at Amtrak (Finkelman Deposition at 171-173); (b) the terms of the collective bargaining agreement ("CBA") between Amtrak and the union, despite Dr. Finkelman's concession that the CBA could impact how personnel decisions are made (Finkelman Deposition at 97); (c) the consent decrees from the McLaurin and Thornton cases, despite acknowledging again that these decrees could impact HR decisions (Finkelman Deposition at 98) 4 ; and (d) many depositions of declarants and Amtrak managers addressing policy, procedures and specific events in much more detail than that found in the Declarations and the Selection Roulette document.

B. Dr. Finkelman's Selective Presentation of the Evidence

17. Scientists are not supposed to ignore inconvenient data that fail to fit a preferred theory (Greenwald, 2004). The Selection Roulette document assembled by Plaintiffs' counsel and used by Dr. Finkelman to prepare his report contains a number of examples of good practices by Amtrak's managers and HR staff, yet Dr. Finkelman chose not to discuss those examples in his report.

⁴ The consent decrees do in fact contain many provisions affecting HR processes at Amtrak, including requirements to hire neutral expert consultants to recommend and oversee changes to the screening, interviewing, performance appraisal and selection process, appointment of an internal monitor, reporting and recordkeeping requirements, and other provisions aimed at ensuring fair treatment and making Amtrak accountable for such treatment.

- For instance, the deposition summaries by Plaintiffs' counsel show: (a) that HR 18. staff were involved in interviews and personnel decision-making and were consulted on interview questions to ask (increasing the chance that fairness and process concerns were at work given the role of HR in helping to professionalize and routinize HR procedures and protect the organization from charges of illegality—as Dr. Finkelman notes in his report, this is one of the key functions of an HR department); (b) that panels of interviewers as opposed to single interviewers were used (in line with good practice recommendations; Campion et al., 1998); (c) that structured interviewing techniques were used (in line with good practice recommendations $\frac{5}{3}$; Dipboye et al., 2012); (d) that there was consistent use of questions and procedures by some of the very managers who supposedly were engaging in "selection roulette"; (e) that large amounts of individuating information (i.e., personalized, job-relevant information) was available to the decision-makers about candidates (and such information has powerful debiasing effects as I discuss below); (f) that interviewers and decision-makers were held accountable to one another for making decisions based on job-relevant information (which is another powerful debiasing factor that I also discuss below).
- 19. Likewise, exhibits that Dr. Finkelman supposedly considered show substantial structure in Amtrak's personnel processes and show that Amtrak did not have a uniform or common practice of having managers make highly subjective and unstructured personnel judgments (see, e.g., Exhibits 70 and 734 to the Deposition of Sheila Davidson). These

⁵ An e-mail from Amtrak's HR to a manager about how to conduct interviews appropriately explains the idea and purpose behind the behavioral approach: "Here's the subject form. As you'll recall from the class, behavioral-based interviewing's goal is to make the applicant the expert on their experience. 'If they've done it, they can talk about it--and provide specific examples.' Our job is to determine which job dimensions are the most critical to someone's success as a bridge inspector; then we use/develop questions that will give us useful information about the person's work habits, temperament, etc. Please zero in on the five or six dimensions that are the most important. With only 20 minutes a pop, we're not going to be able to gather much more than a 'sample and taste' of each applicants' background. Please complete the form and return it to me at your earliest convenience." (AMK0000528733)

documents show that in fact Amtrak employed structured assessment questions and otherwise structured the interviewing and rating process through imposed questions and rating scales, facts showing that Amtrak had a professional HR operation that was following the good practice recommendations from industrial-organizational psychology (see, e.g., Guion & Highhouse, 2006, on the use of behavioral and situational questions as a way of structuring interviews to improve the accuracy and utility of assessments).

- C. Dr. Finkelman Did Not Use Any Reliable Method to Formulate His Opinions
- 20. Reliable methods for analyzing data must be used to reach scientifically reliable conclusions (see, e.g., Mitchell et al., 2011). The Plaintiffs' memorandum in support of class certification states that Dr. Finkelman "analyzed" Amtrak's HR practices (p. 8), but in fact there was no scientific analysis involved in what Dr. Finkelman did here.
- 21. Nowhere does Dr. Finkelman disclose any method to support his opinions: he did not analyze any Amtrak policies or practices using any objective method for determining the adequacy of policies and procedures, he conducted no impartial observations of conditions at Amtrak, and he used no scientific metric or tools to measure and analyze the effects of subjectivity in any HR decisions. Dr. Finkelman's opinion that Amtrak's HR "process appears to be highly subjective and unstructured" (Finkelman Report at 24) has no scientific basis; it is just a "trust me, I'm an expert" opinion. Scientists are expected to show that their claims are grounded in the scientific method—and are not just personal beliefs or hunches (see, e.g., Faust, 1984; Faust et al., 2010; Munro et al., 2004; National Research Council, 2009; Oskamp, 1965).
- 22. The unscientific nature of Dr. Finkelman's opinions can be seen by asking exactly what scientific standard or principle he used to assess how "disturbing and pervasive randomness" supposedly existed at Amtrak and to assess that Amtrak's HR process was "highly subjective and unstructured" (Finkelman Report at 24). Dr. Finkelman provides absolutely no

scientific standards, principles, or even definitions that guided his analysis, he does not cite to any social science research to support any of his opinions, and he does not even describe and analyze the particular assessment items used for any position.

- 23. In the next section, I discuss further problems with Dr. Finkelman's claim that Amtrak had a highly subjective and unstructured HR process.
 - D. Dr. Finkelman's Opinion on Subjectivity Lacks Any Basis in Case Data or Social Science Research
 - a. Subjectivity in Personnel Processes is Multi-faceted and Cannot Be Treated as a Single, Simple Concept
- 24. The concept of subjectivity figures prominently in Dr. Finkelman's report, yet nowhere does Dr. Finkelman explain exactly what he means by that concept or how he determined what kinds of subjectivity and how much subjectivity were supposedly present in Amtrak's HR personnel decision-making. From an HR and industrial-organizational psychology perspective, subjectivity refers to measures used to assess the performance of an employee on the job or a candidate in an interview "that rely on the evaluative judgment of another person," as compared to more objective measures that "include records of job-related outcomes (e.g., production counts, sales, accidents, salary, job-level)" (Woehr & Roch, 2012, p. 517).
- 25. Measures for assessing potential and performance lie on a continuum, from very specific and concrete (i.e., more objective measures) to very non-specific and abstract (i.e., more subjective measures). For instance, a salesperson may be evaluated for customer satisfaction, and that dimension of performance can be measured using both more objective criteria, such as a simple count of the number of customer complaints received during the year, and more subjective criteria, such as customer responses to a survey sent to the customer after a purchase. Both types of measures can provide useful and legitimate information for assessment purposes (Borman & Smith, 2012), and subjective ratings can have greater predictive validity than more

objective measures (i.e., subjective ratings can be better predictors of potential and future job performance than simple objective measures, such as counting absences, that may not be a good indicator of the qualities of greatest interest or that may be contaminated by non-performance factors) (Woehr & Roch, 2012).

- 26. Subjective assessment criteria vary widely in the amount of judgment required by a manager. A question that asks whether a candidate has leadership potential, with no guidance given on how to elicit information on leadership potential or on how to rate candidate answers, would call for more subjective judgment than a question that focuses on particular aspects of leadership, elicits specific examples of past behavior from candidates, and gives guidance on how to rate answers on a defined rating scale.
- 27. Subjective assessment criteria also vary widely in the types of managerial judgments they require. Subjective criteria used to assess positions involving management responsibilities are typically very different from those used to assess lower-level positions with very specific or limited job tasks (e.g., leadership potential for managerial positions versus ability to follow directions for lower-level positions). Some of these criteria will focus the rater on very specific behaviors or know-how and will call for very simple assessments; some of these criteria, by design, will be much more encompassing and require a much broader assessment of a candidate's qualifications or potential.
- 28. Furthermore, in assessing the likelihood that a subjective personnel judgment is likely to be more or less accurate, an HR manager (or a psychologist reviewing an assessment system) must take into account the structure provided to assist with the judgment. By structuring the assessment process, organizations focus managers on the proper topics and questions to use to elicit job-relevant information to help raters make judgments that provide valid assessments of

an employee's past performance and predict future performance in a particular position. It is in the interest of an organization that its raters make valid assessments, in order to sort candidates and employees along a merit continuum for purposes of hiring, compensation, promotion, assignment, training, and termination. Companies provide structure and guidance for subjective personnel ratings through training in how to make assessments, the involvement of HR personnel in decision processes to vet the criteria and questions to be used and to oversee the process for fairness and consistency, and through the provision of rating forms and instructions that standardize assessments and provide information on what to consider, what not to consider, and how to score candidates on the criteria.

- 29. In sum, three factors must be taken into account when conducting a review of an organization's HR processes and the use of subjective assessments: (a) subjectivity is not a dichotomous variable—subjectivity exists to varying degrees across the criteria used to assess employees and candidates; (b) different criteria call for different types of subjective judgments on the part of managers; (c) the degree of subjectivity, and types of subjectivity, involved in personnel assessments have to be considered in conjunction with the structure and guidance provided by an organization on how to make a particular subjective personnel assessment.
- 30. Dr. Finkelman performed no analysis of the levels and types of subjectivity involved in Amtrak's personnel assessments, even though he conceded at his deposition that subjectivity is not an either/or variable but rather part of an objectivity-subjectivity continuum (i.e., there are levels of subjectivity rather than subjectivity either being present or not) (Finkelman Deposition at 107). He also testified at his deposition that subjectivity can be measured but that such measurement was "not something I try to do here" (Finkelman Deposition at 106).

- Amtrak, (b) never shows that the same subjective criteria are used across jobs, (c) never shows that the subjective criteria used across positions involve the same amount and types of subjective judgment, (d) never shows that there is same level of structure and guidance (or lack thereof) surrounding each subjective criterion, and (e) never shows that managers exercise subjective judgment in the same way, much less in a way that leads to discrimination against the putative class members. With respect to this last causation point, Dr. Finkelman testified that he undertook no analysis to determine what effects, if any, subjective personnel judgments had on the assessments of any of the putative class members (Finkelman Deposition at 120, 157).
- Amtrak that is apparent from the discovery materials, one final conceptual point about subjective assessment criteria is in order. Dr. Finkelman suggests that subjective criteria are disfavored and states that they should be eliminated from HR processes (Finkelman Report at 20), but that is clearly not correct from a psychological standpoint: subjective criteria can have greater predictive validity than objective criteria (Woehr & Roch, 2012), and objective criteria can present problems of their own (including that some objective criteria show racial group differences; see Hough, Oswald & Ployhart, 2001). As Borman and Smith (2012) discuss, objective criteria typically address only a small proportion of the job's performance requirements, can be contaminated by factors beyond the employee's and manager's control, and even "objective" criteria will involve subjective judgment and managerial discretion. For instance, absenteeism is typically seen as an objective criterion of performance because the number of days worked can be determined by time records, but judgments will have to be made about what counts as an absence where part of a work day is missed and managers may have

discretion to make exceptions and not count an absence against an employee with a good excuse. Many jobs involve tasks and skills, such as leadership and creativity, that are difficult, if not impossible, to reduce to simple objective criteria, and the need to develop a diverse portfolio of subjective criteria to assess performance on a diverse array of tasks is recognized as necessary and legitimate within industrial-organizational psychology (see, e.g., Austin & Villanova, 1992; Borman & Smith, 2012): "Whereas objective measures might appear to be the preferred method for assessing performance, there is general agreement that objective measures simply are not feasible in most settings. Consequently, the use of subjective measures as criteria in selection and assessment has been, and continues to be, far more common" (Woeher & Roch, 2012, p. 517).6

b. Evidence of Substantial Differences in Subjective Assessments Across Positions

33. In order to analyze the level of subjectivity in a company's assessment process, one must examine the jobs at issue in a case and how candidates for those jobs are assessed and selected. The place to start with such an analysis is Amtrak's job descriptions, which set out the requirements for the various jobs involved in the case, and Amtrak's interview guides, which set out the specific assessment criteria, questions, rating scales, and procedures to be used to interview and evaluate candidates for these jobs. These documents were available to Dr. Finkelman, but he provides no analysis of these documents and does not list them as documents on which he relied. As I show below, these documents show a wide range of requirements and

⁶ Woehr and Roch (2012) go on to note that "even for jobs for which objective measures should ostensibly be readily available, subjective measures are often the criterion of choice. That is, given the high level of contamination (i.e., the influence of factors outside the individual's control) and deficiency (i.e., the lack of influence of factors important for job performance) in typical objective measures, subjective ratings are viewed as more appropriate" (p. 518).

qualifications across jobs and show that a wide range of criteria were used to make assessments and selections for these jobs.

- 34. First, the various jobs involved in this case implicate a wide range of qualifications, duties and responsibilities that by necessity require different types of evaluations (e.g., how one evaluates a chef or coach cleaner will be very different from how one evaluates a radio maintainer or police officer). Some of these requirements are fairly objective and can be easily assessed (e.g., the requirement that a radio maintainer have a certain FCC license); some call for more subjective assessments (e.g., the requirement that a chef be able to work independently and adapt to changing circumstances). The list below illustrates this wide range of required qualifications and duties across jobs:
 - a. Assigned laborer: no work experience required; high school diploma required; must be able to perform assigned duties with minimum supervision and follow instructions from supervisors (Document AMK000048297).
 - b. Chef: three to five years of experience and cooking school can substitute for two of those years; must complete a job-related selection instrument; good visual acuity, good personal hygiene and legible writing required; must be able to adapt to changing conditions and work independently; required duties include coordinating activities for food specialist for preplanned menus, estimating food consumption for ordering purposes, preparing food, and cleanliness inspections (Document AMK000047365).
 - c. Coach Cleaner: no prior experience required; high school diploma required; must be able to clean the inside and outside of passenger cars and put supplies in the cars (AMK0000433766).
 - d. Crew Dispatcher: high school diploma or GED and two years of railroad or similar experience required and two years of college preferred; must be computer literate, must have good oral and written communication skills and must have a willingness to learn labor and legal rules; required duties include communicating with service personnel to ensure that operating procedures are followed and maintaining required reports and records (AMK000044236).
 - e. Machinist Lead Inspector: must have passed examination on safe handling and use of acetylene and oxygen equipment and must be qualified to inspect

- locomotive and passenger car wheelsets; duties include such inspections along with other machinist duties (AMK000040909).
- f. Police Officer: must have graduated from accredited police department academy or have college equivalents; must be able to deal effectively with people to resolve problems and neutralize hostilities; duties include providing police protection for passengers and their property (AMK000043536).
- g. Product Line Supervisor-Crew Management: high school diploma required and bachelors in business, transportation or related field preferred; must have working knowledge of Amtrak routes and train movement and must have good communication skills, ability to work with all levels of employees, and ability to work under pressure with time constraints; duties include real-time management and coordination of crews, developing good working relations among the crew, and leading and assisting a team of crew management (AMK000044354).
- h. Radio Maintainer: must have high school diploma and technical school training and at least two years of experience; must have FCC license or NABER certificate; duties include installing, removing, repairing and adjusting two-way radio communication equipment (AMK0000435382).
- i. Red Cap: no work experience required; high school education required; must conform to Amtrak's Standards of Excellence, Safety Program and Uniform Policy and must maintain cordial relations with the public; duties include assisting passengers with their baggage and ensuring their protection and safety; heavy lifting is required (AMK0000482459).
- j. Yardmaster: must have high school degree or equivalent and be familiar with equipment compatibility and have satisfactory attendance and safety records; duties include control of yard switching crew, ensuring safe and efficient switching of trains, and documentation of these functions (AMK0000516492).
- 35. Second, as one would expect given the differences in job descriptions, the interview guides (i.e., the documents that indicate what qualities to assess and provide structure for asking questions and scoring responses) differ greatly in the criteria used to make evaluations and in the kinds of questions used to elicit responses. The list below demonstrates considerable variability in types of criteria used across positions (and at times *within* the same position—see the examples of the communications supervisor position below), demonstrates considerable variability in the number of criteria used and amount of job-relevant information to be collected

across positions (i.e., for some jobs a tremendous amount of information was collected and much less for other jobs), and shows how the questions vary in terms of how much structure is provided, the kind of structure provided and the level of subjective evaluation and analysis that would be required to rate a candidate's response:

- a. Coach Cleaner: evaluated on safety, motivation/initiative, performance/reliability, details, interactional skills, customer service, and behavior; situational and behavior-based questions are used (i.e., questions that ask the candidate to describe a particular type of situation and how it was handled), with each response rated on a five-point scale and a total numerical rating and an overall recommendation of accept, decline or other being given; in addition, a resume was collected, and a background screen and safety and quality awareness questionnaires completed (AMK0000484964 484971).
- b. Diesel/Roadway Mechanic: work history, education, attendance, work safety, and communication and interpersonal skills are evaluated using a mixture of direct questions (e.g., how many times were you unable to work during the last 12 months?) and open-ended questions (e.g., what are your greatest strengths as an employee?) and situational questions (e.g., what kinds of accidents or near misses have you had); a defined five-point rating scale is given for evaluating answers to each question; the form makes clear that an HR representative will be (and was in this case) involved in the interview (AMK0000528148 528152).
- c. Laborer: evaluated on customer service using situational questions rated on a five-point scale; additional questions seek information on the candidate's knowledge about basic matters (how to water and pump the cars, meaning of the term "trashing," and amount of time allowed to remove trash from train side) with the correct answers that should be given—the interviewer simply has to indicate whether the candidate knew the right answer to these questions (AMK0000490984 490989).
- d. Communications Supervisor (Providence): Asks 15 technical questions, almost all of which appear to have clearly right and wrong answers (AMK0000531098 – 531099).
- e. Communications Supervisor (Unspecified Location): evaluated on job experience, attention to detail, initiative, contribution to team, and work safety using a mixture of open-ended questions, situational questions, and questions asking for examples from the candidate's past; the form itself provides no rating scale (AMK0000507652 507664).
- f. Lead Payroll Clerk: evaluated for competency using 14 sub-criteria (analysis, attendance, attention to detail, control, controlled decision making, delegation,

- energy, initiative, oral communications, planning and organization, practical learning, preciseness, stress tolerance, and written communication) and technical ability using 5 sub-criteria (attendance, contribution to team, delegation, energy, and practical learning) (AMK116927- 116943).
- g. Lineman: evaluated on mechanical ability, manual dexterity, attendance, industry background, and self-development using a mixture of open-ended questions, situational questions, and questions asking for information and examples from the candidate's past (e.g., types of equipment trained on and prior work at heights); responses are scored on a defined five-point rating scale (AMK0000529308 529315).
- h. Police Officer: evaluated on developing relationships, risk-taking, judgment, supervisor identification, vigilance, and controlled demeanor; a mixture of openended questions and situational and behavior-based questions are used; the form itself provides no rating scale (AMK0000429837 429844).
- i. Signal Helper: evaluated on background, work safety, and communication on a five-point scale; additional questions seek information on the candidate's technical knowledge and future aspirations (AMK0000538279 538283).
- j. Yardmaster: evaluated on job experience, listening, oral communication, leadership, controlled decision making, equipment operation, supervisor identification, attention to detail, integrity, and work safety using a mixture of open-ended questions, situational questions, and questions asking for examples from the candidate's past; responses are scored on a defined five-point rating scale (AMK0000507652 507664).
- 36. Third, many of the interview guides ask candidates to give examples of situations they dealt with on past jobs and how they reacted. Because of the very nature of this approach, each interview can vary in the level and kind of subjective evaluation required depending on the specific answers given by a candidate (e.g., an emergency in a laborer's job, such as a leaky pipe, is likely to be very different from an emergency in a police officer's job, and each candidate for each position may describe very different emergencies, some of which have obvious "right" answers and some of which have only "shades of grey" answers). This approach to interviewing, which as noted above is a recommended practice within industrial-organizational psychology to provide structure for interviews (and thus increase accuracy and limit bias) and which is

designed to give each candidate a chance to demonstrate that he or she can meet the needs of a job by tailoring the questions to the candidate's past, by its very nature ensures that managers will not receive a uniform set of responses for rating purposes.

- 37. Fourth, Amtrak provided considerable structure for assessments. Huffcutt and Arthur (1994) differentiate four levels of structure in interviews, going from unstructured to highly structured: at Level 1, no formal constraints on questioning or how to rate answers is provided and a simple global evaluation is used; at Level 2, some formal constraints are provided by specifying criteria to cover and evaluate, but specific questions to ask are not supplied; at Level 3, questions and rating scales, with rating guidance, are given but some variance is allowed across candidates; at Level 4, questions and rating scales are provided, but no variance is allowed. Amtrak's assessment processes fall on the highly structured side of Huffcut and Arthur's (1994) continuum (i.e., above level 2 because structure on topics, questions, and rating scales are given and standardization is sought). In addition, many of the interviews were conducted by multiple interviewers, involved note-taking by the interviewers, involved ratings made on anchored rating scales, and were to follow a set procedure that limits the amount of ancillary, possibly irrelevant information exchanged, all of which further structure the assessment process and reduces the risk of discrimination (Campion et al., 1997). Amtrak's assessment process cannot reasonably be described as unstructured.
- 38. In sum, Amtrak's job descriptions and interview guides establish that Amtrak did not have a single, uniform system of subjective personnel assessments, much less a single "highly subjective and unstructured" process. In the documents that I reviewed, there is tremendous variety in the amount and type of information obtained from candidates for

assessment purposes (both across and within the various positions), and substantial structure is supplied for the assessment process.

- c. The Research Literature Does Not Support Dr. Finkelman's Opinion on Subjective Personnel Judgments as a Source of Bias
- 39. A key assumption by Dr. Finkelman is that companies must limit subjectivity in their HR processes to avoid discrimination. Dr. Finkelman cites no empirical research to support that assumption; that may be because that assumption is contradicted by the empirical evidence, which reveals that in fact African-Americans often fare as well or better when employers use subjective as opposed to objective assessment measures.
- 40. Industrial-organizational psychologists have conducted numerous studies on whether subjective assessment criteria are racially biased, and these studies collectively reach a conclusion that directly contradicts Dr. Finkelman's assumption:
 - a. In a 1998 literature review article, two experts on personnel psychology specifically addressed the relationship between subjectivity and bias and concluded that subjective judgment is not the trigger to bias that Dr. Finkelman suggests:
 - There is increased recognition that subjectivity does not automatically translate into rater error or bias and that ratings are most likely valid reflections of true performance and represent a low-cost mechanism for evaluating employees. The notion that performance evaluations and particularly supervisory ratings of performance are biased against racial and gender groups is simply not supported by the empirical data (Arvey & Murphy, 1998, p. 163, emphasis added).
 - b. In a recent large meta-analysis of diverse organizational datasets on ethnic and racial group differences in job performance (i.e., data from real companies) (N = 84,295), Roth and colleagues (2003) found that objective measures of job performance were associated with similar, and sometimes larger, group differences than subjective measures. Roth and colleagues concluded that their "results do not support the"

² A meta-analysis is a quantitative synthesis of results from multiple individual studies on a research question. "Meta-analysis allows the combining of numerical results from a few or many studies, the accurate estimation of descriptive statistics and the explanation of inconsistencies as well as the discovery of moderators and mediators in bodies of research findings" (Rosenthal & DiMatteo, 2001, p. 61). Properly done, meta-analyses provide a sounder basis for estimating effect sizes than do qualitative or narrative literature reviews.

- position that subjective measures have more potential for bias than objective measures. Instead, we found the opposite" (Roth et al., 2003, p. 702, emphasis added).
- c. In another recent meta-analysis of field studies on Black-White differences in rated job performance (N = 110,000), McKay and McDaniel (2006) tested the assumption that objective performance data are less subject to racial bias than are subjective measures and concluded that there was no clear evidence that subjective measurement methods disadvantaged minorities relative to objective measurement methods:

Measurement method addresses whether work performance is measured subjectively with ratings of performance or objectively scored using mechanical or quantified techniques. Evidence provided in Table 5 suggests that measurement method has a relatively low impact on mean racial differences in work performance (R = .10). Summary results for this moderator presented in Table 2 support this conclusion because effect sizes are very similar for subjective (d = 0.28) and objective (d = 0.22) measures of performance. In general, there does not appear to be a clear pattern of measurement method results (McKay & McDaniel, 2006, p. 548).

- 41. In sum, Dr. Finkelman's key contention that subjective evaluations lead to bias is at odds with the accumulated empirical research.
 - E. Subjective Evaluations of Personnel Do Not Occur in a Vacuum But Rather in the Context of Many Variables That Can Focus Managers on Job Relevant Information and Reduce the Risk of Bias
- 42. In addition to ignoring research showing that subjective criteria do not usher in racial bias, Dr. Finkelman ignores a large amount of other social science research that bears on the likelihood of discrimination occurring within an organization. There are a number of ways to prevent bias from affecting personnel decisions (Mitchell & Tetlock, 2009), and any reasonable attempt to analyze the risk of discrimination at a company must take the full panoply of good practices into account.⁸

⁸ Omission of discussion of intergroup contact is particularly surprising in light of the unpublished research paper submitted by Dr. Finkelman in discovery, in which Dr. Finkelman and his coauthors report results showing that contact with an out-group (i.e., a group outside one's own "in-group") reduced prejudice toward that group (Hee, Finkelman, Lopez & Ensari, undated; this paper appears to be the paper listed on page 5 of Dr. Finkelman's CV as forthcoming in the *Journal of Psychological Issues in Organizational Culture*).

- a. *Individuating Information*. As noted above, it was apparent from the discovery materials that I reviewed that managers often possessed substantial amounts of job-relevant information about the employees and candidates they were assessing. When people know another individual, they tend to base their judgments about that person on what they know about that particular person (or on what psychologists call "individuating" information) rather than on assumptions about the demographic groups to which that person may belong: "When the only information available about a person is his or his membership in a stereotyped group, perceivers consider the stereotype informative and use it to evaluate the person. However, when perceivers also possess relevant individuating information about a person, they typically do not use stereotypes to evaluate him or her" (Kunda & Spencer, 2003, p. 538).
 - i. Individuating information tends to be much more powerful than stereotypes (i.e., people tend to give more weight to this individualized information than to group stereotypes in evaluating or making predictions about others) (see Kunda & Thagard, 1996; Landy, 2008; see also Davison & Burke, 2000; DeDreu et al., 1995; Gordon & Arvey, 2004; Leyens et al., 1994; Nisbett et al., 1981; Quinn et al., 2009; Quinn & Macrae, 2005; Olian et al., 1988; Swim et al., 1989; Tosi & Einbender, 1985; Zukier, 1982).
 - ii. Even very brief encounters or very small amounts of individuating information—encounters as short as a few minutes and information as limited as knowledge about the type of car a person drives—induce people to judge others as individuals rather than simply as members of a possibly stereotyped group (e.g., Kunda & Spencer, 2003; Lawrence & Richardson, 2005).
- b. Accountability. The discovery materials I reviewed also indicated that managers often had to discuss the reasoning behind their assessments to other interviewers or HR staff. A large amount of social science research indicates that such accountability decreases bias (see Lerner & Tetlock, 1999). Even very weak forms of accountability, such as a mere expectation of having to discuss a decision, can debias (see, e.g., Ford et al., 2004; Hagafors & Brehmer, 1983; Pennington & Schlenker, 1997; Ruscher & Duval, 1998; Tetlock). Dr. Finkelman ignores the accountability effects that arise from interpersonal pressures associated with on-going interactions in work settings and the threat of job loss or other discipline imposed under Amtrak policies and the law for unjustifiable decisions.
- c. *Structured HR Processes*. As discussed above, adding structure to an assessment process focuses raters on job-relevant information and reduces the risk of rater bias and error in assessments. A variety of behavior-based systems, for instance, can be used to structure assessments and improve consistency and accuracy by making clear which competencies and behaviors are relevant (see, e.g., Dipboye et al., 2012; Guion & Highhouse, 2006; Janz et al., 1986). As noted above,

- considerable structure is provided by Amtrak's HR department on how interviews and assessments should be conducted, including structured evaluation forms and the use of behavioral description and situational questions (e.g., Deposition of Sheila Davidson, Exhibits 71 & 73).
- d. Anti-discrimination norms. Publicizing norms of fairness and equality can counter potential intergroup biases (e.g., Castelli & Tomelleri, 2008; Lowery et al., 2001; Moskowitz et al., 2004; Sinclair et al., 2005). There is evidence in the record, though not addressed in Dr. Finkelman's report, that Amtrak often endorsed and publicized equal opportunity and fair treatment norms (e.g., Deposition of Sheila Davidson, Exhibits 12-19).
- e. *Outcome Interdependence*. Another important factor that can motivate supervisors and coworkers to focus on individual qualities of other employees is the degree to which the outcomes of supervisors and coworkers depend to some extent on the other employees' performance. Where there is interdependence among employees, employees are likely to base their judgments and decisions about others on veridical beliefs about those individuals rather than on possibly inaccurate beliefs or crude group stereotypes. Research by Fiske and her colleagues (see Fiske, 2000 for a summary) shows that cooperative and competitive outcome interdependence (when another person's cooperation is needed or when another is a competitor) motivates perceivers to attend less to group membership and more to individualized information about another person's skills, abilities, and motivation level.
- f. *Malleability of In-group/Out-group Distinctions*. Organizations may override categorizations along demographic lines by creating a commitment to the organization or the work group, by encouraging workers to see themselves as part of the larger enterprise that is competing with other organizations (Fiske, 1998). In other words, it should not be assumed that race is the most salient distinction among supervisors and employees who work together and share a common organizational or workgroup identity.
- g. *Intergroup Contact*. Dr. Finkelman's own recent research found that intergroup contact reduces prejudice (Hee, Finkelman, Lopez & Ensari, undated), yet Dr. Finkelman did not make any allowance for the prejudice-reducing effect of interracial interactions within Amtrak. Intergroup contact outside the workplace can also debias: Dixon and Rosenbaum (2004) found that "whites who know Hispanics in their communities are less likely to express anti-Hispanic stereotypes; whites who know blacks and Hispanics from school and college are less likely to express stereotypes of both groups; and among whites in the labor force, those who know blacks from work are less likely to express anti-black stereotypes" (p. 276). A comprehensive recent meta-analysis of research on intergroup contact theory concluded that intergroup contact reduced prejudice in 94% of the situations studied: "The meta-analytic results clearly indicate that intergroup contact typically reduces intergroup prejudice. ... In sum, our meta-analytic results provide substantial evidence that intergroup contact can contribute

- meaningfully to reductions in prejudice across a broad range of groups and contexts" (Pettigrew & Tropp, 2006, p. 766; see also Hodson, 2011).
- h. Individual Differences in the Likelihood of Being Biased or Exhibiting Improper Behavior. An individual's background and values, and prior knowledge of a target person, will affect the likelihood that group-based stereotypes will be activated and the likelihood that stereotypes will influence subsequent judgments or behavior toward that person (Blair, 2002). As many studies now document, there are wide individual differences in the likelihood that persons will exhibit stereotyped judgments or prejudicial attitudes, with differences depending on individual values, goals, and education (see, e.g., Blair, 2002; Devine et al., 2002; Glaser & Kihlstrom, 2005; Hausmann & Ryan, 2004; Klonis et al., 2005; Kunda & Spencer, 2003; Maddux et al., 2005; Moskowitz et al., 1999; Moskowitz et al., 2004; Plant & Devine, 1998). For instance, people who are intrinsically motivated to control prejudicial responses can successfully control bias in their judgments and decisions (e.g., Devine et al., 2002; Maddux et al., 2005; Plant & Devine, 1998). More generally, individuals differ in their propensities to engage in misbehavior in organizational settings: individual personality traits, work attitudes, and ethical orientations will affect the likelihood of misbehavior occurring (e.g., Fong & Tosi, 2007; Treviño et al., 2006; Vardi & Weitz, 2004). Given the lack of information about individual characteristics of Amtrak's employees and managers, it is inappropriate to assume that any or all white managers at Amtrak had a propensity to engage in racially-motivated acts of misbehavior or unfair treatment.

III. CONCLUSION

- 43. Dr. Finkelman did not base his opinions on adequate data, ignored a large amount of relevant data, and ignored evidence of good HR practices found within the limited case materials that he did consider.
- 44. Dr. Finkelman did not use a reliable method to form his opinions. In particular, Dr. Finkelman did not analyze subjectivity in HR processes at Amtrak in a scientifically reliable way. He provides absolutely no evidence that the same subjective criteria were used across and within positions over time, and he provides absolutely no evidence that any exercise of subjective judgment of any kind led to any discrimination in this case. Furthermore, Dr. Finkelman ignored evidence that there were in fact large differences in the kinds of criteria used

by Amtrak managers to make personnel assessments and in the kinds of judgments called for by these criteria.

- 45. Finally, Dr. Finkelman failed to disclose that a large body of social science research undercuts his core assumption that subjective personnel evaluations are inherently biased against African-Americans. Dr. Finkelman also ignored large bodies of research that point to several factors that serve as strong checks on bias and discrimination within an organization and case materials indicating that many, if not all, of these factors could well be present at Amtrak.
- 46. For all of these reasons, which are set out in much more detail in Part II, it is my opinion that the conclusions stated in Dr. Finkelman's report are scientifically unsupportable and unreliable.

Date: 6-25-12

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Exhibit A

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Academic Appointments

University of Virginia May 2006 to Present
Mortimer M. Caplin Professor of Law, Fall 2010-Present
Class of 1948 Research Professor, Fall 2010-Present
Daniel Caplin Professor of Law, 2008-2010
E. James Kelly, Jr.-Class of 1965 Research Professor, 2006-2009
Visiting Associate Professor of Law, Spring 2005

Florida State University

Sheila M. McDevitt Professor of Law, 2005-2006

Associate Professor of Law, 2004-Present

Assistant Professor of Law, 2002-2004

Courtesy Professor of Psychology, 2002-2006

Vanderbilt University
Visiting Associate Professor of Law
Fall 2004

Michigan State University
Adjunct Professor of Psychology, 2001-2002
Assistant Professor of Law, 2000-2002

Education

Boalt Hall School of Law University of California, Berkeley J.D., 1993 Executive Editor, California Law Review Member, Industrial Relations Law Journal, Spring 1991

Graduate Program in Psychology
University of California, Berkeley
Ph.D., 1994, M.A., 1990 - Emphasis in Social Psychology (Dissertation Committee: Philip E. Tetlock, Tom R. Tyler and Franklin Zimring)
Jacob K. Javits Fellow, 1988-1992
MacArthur Foundation Fellow in Political Psychology, 1988-1989
Teaching Assistant, Course on Attitudes and Persuasion, Spring 1990

University of Arkansas B.A., 1988 - Psychology, magna cum laude Phi Beta Kappa

Publications

2012

Allan G. King, Jeffrey S. Klein & Gregory Mitchell, *Effective Use and Presentation of Social Science Evidence*, 37 EMPLOYMENT RELATIONS LAW JOURNAL 3-21 (2012)

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2011

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2010

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2009

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Philip E. Tetlock & Gregory Mitchell, *Implicit Bias and Accountability Systems: What Must Organizations Do to Prevent Discrimination?*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 3-38 (Barry Staw & Arthur Brief eds., 2009)

Philip E. Tetlock & Gregory Mitchell, *A Renewed Appeal for Adversarial Collaboration*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 71-72 (Barry Staw & Arthur Brief eds., 2009)

Philip E. Tetlock & Gregory Mitchell, *Adversarial Collaboration Aborted But Our Offer Still Stands*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 77-79 (Barry Staw & Arthur Brief eds., 2009)

2008

Adam J. Hirsch & Gregory Mitchell, *Law & Proximity*, 2008 UNIVERSITY OF ILLINOIS LAW REVIEW 557-598.

John Monahan, Laurens Walker & Gregory Mitchell, *Contextual Evidence of Gender Discrimination: The Ascendance of "Social Frameworks"*, 94 VIRGINIA LAW REVIEW 1705-1739 (2008)

Philip E. Tetlock & Gregory Mitchell, *Calibrating Prejudice in Milliseconds*, 71 SOCIAL PSYCHOLOGY QUARTERLY 12-16 (2008)

Philip E. Tetlock, Gregory Mitchell & Terry L. Murray, *The Challenge of Debiasing Personnel Decisions: Avoiding Both Under- and Over-Correction*, 1 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY: PERSPECTIVES ON SCIENCE AND PRACTICE 439-443 (2008)

2006

Gregory Mitchell & Philip E. Tetlock, *Antidiscrimination Law and the Perils of Mindreading*, 67 OHIO STATE LAW JOURNAL 1023-1121 (2006)

Gregory Mitchell & Philip E. Tetlock, *An Empirical Inquiry into the Relation of Corrective Justice to Distributive Justice*, 3 JOURNAL OF EMPIRICAL LEGAL STUDIES 421-466 (2006)

Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINNESOTA LAW REVIEW 1620-1663 (2006)

2005

Gregory Mitchell, *Libertarian Paternalism Is an Oxymoron*, 99 NORTHWESTERN UNIVERSITY LAW REVIEW 1245-1277 (2005)

Gregory Mitchell, *Empirical Legal Scholarship as Scientific Dialogue*, 83 NORTH CAROLINA LAW REVIEW 167-204 (2005)

Gregory Mitchell, *Beyond Fireside Inductions*, 32 FLORIDA STATE UNIVERSITY LAW REVIEW 315-321 (2005) (Symposium: The Behavioral Analysis of Legal Institutions)

Gregory Mitchell, *Asking the Right Questions About Judge and Jury Competence*, 32 FLORIDA STATE UNIVERSITY LAW REVIEW 519-527 (2005) (Symposium: The Behavioral Analysis of Legal Institutions)

2004

Gregory Mitchell, Case Studies, Counterfactuals, and Causal Explanations, 152 University of Pennsylvania Law Review 1517-1608 (2004)

2003

Gregory Mitchell, *Tendencies Versus Boundaries: Levels of Generality in Behavioral Law and Economics*, 56 VANDERBILT LAW REVIEW 1781-1812 (2003)

Gregory Mitchell, *Mapping Evidence Law*, 2003 MICHIGAN STATE LAW REVIEW 1065-1148 (Symposium: Visions of Rationality in Evidence Law)

Gregory Mitchell, Philip E. Tetlock, Daniel G. Newman & Jennifer S. Lerner, *Experiments Behind the Veil: Structural Influences on Judgments of Social Justice*, 24 POLITICAL PSYCHOLOGY 519-547 (2003)

2002

Gregory Mitchell, Why Law and Economics' Perfect Rationality Should Not Be Traded for Behavioral Law and Economics' Equal Incompetence, 91 GEORGETOWN LAW JOURNAL 67-167

(2002)

Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WILLIAM AND MARY LAW REVIEW 1907-2021 (2002)

Pre-2000

Tom R. Tyler & Gregory Mitchell, Legitimacy and the Empowerment of Discretionary Legal Authority: Abortion and the United States Supreme Court, 43 DUKE LAW JOURNAL 703-815 (1994)

Gregory Mitchell, Comment, Against "Overwhelming" Appellate Activism: Constraining Harmless Error Review, 82 CALIFORNIA LAW REVIEW 1335-1369 (1994)

Gregory Mitchell, Philip E. Tetlock, Barbara Mellers & Lisa Ordóñez, *Judgments of Social Justice: Compromises Between Equality and Efficiency*, 65 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 629-639 (1993)

Philip E. Tetlock & Gregory Mitchell, *Liberal and Conservative Approaches to Justice:* Conflicting Psychopolitical Portraits, in PSYCHOLOGICAL PERSPECTIVES ON JUSTICE 234-255 (Barbara Mellers & Jonathon Baron eds., 1993)

Philip E. Tetlock, Charles McGuire, Jr. & Gregory Mitchell, *Psychological Perspectives on Nuclear Deterrence*, 42 ANNUAL REVIEW OF PSYCHOLOGY 239-276 (1991)

Works in Progress

Detecting and Punishing Unconscious Bias: An Experimental Allegory on the Politicization of Evidential Technology (with Philip E. Tetlock, University of Pennsylvania and L. Jason Anastasopoulos, University of California, Berkeley)

Calibrating Process and Outcome Accountability Systems to Workplaces – and Avoiding Both Under- and Over-correction (with William T. Self, University of California, Berkeley, Philip E. Tetlock, University of Pennsylvania, Barbara A. Mellers University of Pennsylvania, and J. Angus D. Hildreth, University of California, Berkeley)

Simulating the Cumulative Impact of Gender Discrimination in Large Organizations (with Fred Oswald, Rice University)

The Inefficiency of Oral Argument (with David E. Klein, Department of Politics, University of Virginia)

Cognitive Reflection and Economic, Legal and Moral Reasoning

What Does p < .05 Mean?

Reassessing the Predictive Validity of the Race IAT: III. Meta-analysis of Race IAT-Behavior Studies (with Hart Blanton, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

How Prevalent is Implicit Prejudice? (with Hart Blanton, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

Scoring of the Implicit Association Test: Psychometric Considerations (with Hart Blanton,

University of Connecticut, Thomas Craemer, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

A Cross-Sectional Study of Cognitive and Non-Cognitive Predictors of Legal Reasoning and Law School Performance (with David Z. Hambrick, Michigan State University Department of Psychology)

Avoiding Under- and Over-correction of Intergroup Bias (book manuscript under preparation with Philip E. Tetlock, University of Pennsylvania)

Grants

Co-Principal Investigator, *Peer Review of Social Framework Analysis*, Searle Freedom Trust, \$50,000, May 2010-April 2011 (with Christopher Winship, Department of Sociology, Harvard University)

Co-Principal Investigator, What Companies Need to Do to Curb Bias in Employment Practices: A Multi-Method Exploration of the Perceived and Actual Efficacy of Process Versus Outcome Accountability, Society for Human Resource Management Foundation, \$50,000, December 2009-December 2010 (with Philip E. Tetlock, University of Pennsylvania)

Co-Principal Investigator, *Taking a Careful Scientific Second Look Before Making a Big Policy Leap: An Epistemic Audit of the Unconscious-Bias Research Program*, Searle Freedom Trust, \$250,000, August 2009-July 2011 (with Philip E. Tetlock, University of Pennsylvania)

Funding for conference on "The Psychology of Judging," National Science Foundation, \$32,781, March, 2007 (with David E. Klein, University of Virginia Department of Politics; peerreviewed)

Co-Principal Investigator, *The Development and Maintenance of Legal Reasoning*, Michigan State University Intramural Research Grant Program New Faculty Grant, \$50,000, January 2002-June 2003 (with David Z. Hambrick, Michigan State University Department of Psychology, Principal Investigator; competitively awarded grant)

Presentations and Panels

Settling Cases Brought by the EEOC, Annual Meeting of the Society of Industrial-Organizational Psychologists (April, 2012)

Lay Interpretations of Fingerprint Examiner Testimony, University of Illinois College of Law (April, 2012)

Panelist, Effective Use and Management of Social Science Evidence, American Employment Lawyer Council Annual Meeting (October 2011)

Panelist, Developments in Expert Evidence, Littler Mendelson Class Action Summit (September 2011)

Panelist, Communicating Research, and General Discussant, Future of Law & Social Science Workshop (sponsored by National Science Foundation (May 2011)

Resisting Your First Instincts: How Smart Lawyers Can Avoid Stupid Mistakes, Charlottesville-Albemarle Bar Association (April 2011)

Panelist, Translating Research into Action: A Crucial Role for the Legal Academy, 2011 AALS Annual Meeting (January 2011)

Should It Be Easier to Get Married?, E-marriage Symposium, Michigan State University College of Law (November, 2010)

Panelist, Proactive Management of Litigation Risk in Employment Litigation, American Employment Lawyer Council Annual Meeting (October 2010)

In Defense of Thinking, Mortimer M. Caplin Chair Lecture, University of Virginia School of Law (October 2010)

Beyond Context: Social Facts as Case-Specific Evidence, Michigan State University College of Law (February 2010) & Temple University Beasley School of Law (March 2010)

Evaluating Judges, University of Virginia Faculty Workshop (November 2009)

The Legal Relevance of Psychological Research on Memory Validity, 31st Congress of the International Academy of Law and Mental Health (July 2009)

Social Framework Evidence, Olin Conference on Combating Workplace Discrimination (conference presenter, moderator and organizer, April 2009)

Metacognition and Rationality, Seminar on Law and Economics, University of Illinois School of Law (March 2009)

Commenter, Law & Psychology Roundtable, Washington University at St. Louis (March 2008)

Second Thoughts, Distinguished Speaker Lecture, McGeorge School of Law (February 2008)

The Ascendance of Social Frameworks, University of Virginia Faculty Retreat (January 2008) & St. Louis University School of Law (March 2008)

Reassessing the Predictive Validity of the Race IAT, Ohio State University Psychology Department (November 2007)

What Must Organizations Do to Check Implicit Bias?, University of Pennsylvania School of Law, Law and Economics Workshop (March 2007) & Ohio State University Moritz College of Law (November 2007)

Panelist, The Hows and Whys of Empirical Legal Scholarship, Southeastern Association of Law Schools (SEALS) Conference (July 2005)

Government Regulation of Irrationality: Moral and Cognitive Hazards, University of Virginia Faculty Workshop (March 2005)

An Empirical Inquiry into the Relation of Corrective Justice to Distributive Justice, Vanderbilt University Law School Dean's Lunch (November 2004)

Libertarian Paternalism Is an Oxymoron, New York University, Department of Economics, Colloquium on Market Institutions and Economic Processes (November 2004)

Unconfounding Intuitions About Corrective and Distributive Justice, Florida State University College of Law Faculty Workshop (June 2004)

Case Studies, Counterfactuals, and Causal Explanations, Southeastern Association of Law Schools (SEALS) Conference, Young Scholars Workshop (July 2003)

Panelist, Construing Science in Context: What Do Judges Need to Know?, Southeastern Association of Law Schools (SEALS) Conference (July 2003)

Mapping Evidence Law, University of Florida Levin School of Law Faculty Workshop (March 2003) & Michigan State University DCL College of Law Conference on Visions of Rationality in Evidence Law (April 2003)

An Idiosyncratic View of Psychological Theory in the Law, MSU Clinical Psychology Group (April 2001)

Judicial Accountability and Public Perceptions of the Judicial System, MSU-DCL Law Review Forum on the Impact of the 2000 Elections on the Future of Our Courts (November 2000)

Legitimacy and Discretionary Legal Authority, Federal Judicial Center, Washington, DC (January 1994)

Teaching and Service

Associate Editor, JOURNAL OF EMPIRICAL LEGAL STUDIES, 2006-2011

Occasional Referee for National Science Foundation and American Psychologist, Group Processes and Intergroup Relations, Journal of Applied Research in Memory and Cognition, Journal of Empirical Legal Studies, Journal of Applied Research in Memory and Cognition, Journal of Experimental Social Psychology, Journal of Legal Education, Journal of Philosophy, Science and Law, Jurimetrics, Law and Human Behavior, Law & Social Inquiry, Law & Society Review, Perspectives on Psychological Science, Psychology, Crime and Law, South Carolina Law Review, Social Justice Research, university presses, and conference programs

University of Virginia

Courses: Causation in the Law (with Barbara Spellman), Civil Procedure, Class Actions and Public Policy: Mass Torts, Employment Discrimination and Securities Fraud (with Laurens Walker), Employment Discrimination, Evidence, Judgment & Decision-Making, Law & Psychology and Moral Psychology & Law (co-taught with Jonathan Haidt & John Monahan)

Committees: Admissions (2007-2008), Empirical Project Review (2006-2007, 2007-2008, 2010-2011, 2011-2012), Faculty Retreat and Workshops (2011-2012), Junior Faculty Development (2007-2008), Lateral Appointments (2008-2009), Lecturers & Clinics (2010-2011), Student Scholarship (2009-2010), Summer Workshops (2008), Tenure Subcommittee (2007-2008, 2009-1010) and Women's Leadership Council (university committee, 2008-present)

Florida State University

Courses: Civil Procedure, Complex Civil Litigation, Contracts II, Evidence, and Employment Discrimination

Committees: Academic Enrichment (2002-2003), Academic Waivers (2002-2003), Appointments (2003-2004, 2005-2006), University Library Committee (2002-2004), Library Steering Subcommittee (2003-2004), Library Patrons Subcommittee (2002-2003) and Library

Resources Subcommittee (Chair, 2003-2004)

Faculty Advisor to Dispute Resolution Society and Mock Trial Team (2002-2005)

First Year Class Teacher of the Year and Co-Teacher of the Year 2003-2004; Second Year Class Teacher of the Year 2005-2006

Michigan State University

Courses: Civil Procedure I, Civil Procedure II, Complex Civil Litigation and Evidence

Selected Teacher of the Year for Academic Years 2000-2001 and 2001-2002

Committees: Faculty Appointments (2000-2002), Faculty-Student Liaison (2000-2002) and Writing Skills (2000-2001)

Faculty Advisor to Public Interest Law Society and Trial Practice Program

External Examiner for Psychology Dissertation Committees

Vanderbilt University

Course: Evidence

Other Legal Experience

Doramus, Trauger & Ney June 1994-June 2000

Associate

Nashville, Tennessee

U.S. District Judge Thomas A. Wiseman, Jr. June 1993-June 1994

Judicial Clerk

Middle District of Tennessee, Nashville, Tennessee

Expert Consulting 2006-present

LASSC, LLC

Charlottesville, Virginia

Bar Admissions

Tennessee (1994), Middle District of Tennessee (1994), U.S. Court of Appeals for the Sixth Circuit (1996), Eastern District of Tennessee (1997), and U.S. Supreme Court (1999)

Associations and Memberships

American Psychology-Law Society

Association for Psychological Science

Berkeley Law Foundation

Behavioral & Brain Sciences Associate

NBLSA Thurgood Marshall Mock Trial Competition Review Board, 2005-2006, 2010-2012

Harry Phillips American Inn of Court, 1997-1998

Board of Directors, Hands On Nashville, 1999-2000

Exhibit B: Materials Relied on for Report

Expert Report of Jay Finkelman, Ph.D., ABPP, CPE
Fourth Amended Complaint
Answer to Fourth Amended Complaint
Plaintiffs' Motion for Class Certification and Memorandum in Support
Plaintiffs' Objections and Responses to Defendants' Requests for Production of Documents to
Plaintiffs and Their Testifying Expert Jay Finkelman, Ph.D., ABPP, CPE
Consent Decree in Thornton v. National Railroad Passenger Corporation
Consent Decree in McLaurin v. National Railroad Passenger Corporation

Job descriptions for:

Assigned Laborer

• AMK0000482975

Auto Train Attendant

- AMK0000434890
- AMK0000434891
- AMK0000434892
- AMK0000563136

Baggageman

- AMK0000433769
- AMK0000433936
- AMK0000433943
- AMK0000434096
- AMK0000434110
- AMK0000434111
- AMK0000434112
- AMK0000434113
- AMK0000482463
- AMK0000482470
- AMK0000482568
- AMK0000482571
- AMK0000519693

Car Repairman

- AMK0000434116
- AMK0000519020

Carman

- AMK0000427940
- AMK0000434076
- AMK0000434077
- AMK0000434079
- AMK0000434091
- AMK0000436619

- AMK0000482472
- AMK0000446897
- AMK0000447572
- AMK0000447832
- AMK0000447833
- AMK0000447835
- AMK0000447836

Cashier

AMK0000519687

Chef

- AMK0000473658
- AMK0000518126

Clerk Steno

AMK0000433935

Clerk Typist

- AMK0000438403
- AMK0000478720 AMK0000478721

Coach Cleaner

- AMK0000433766
- AMK0000433952
- AMK0000433953
- AMK0000433954
- AMK0000433964
- AMK0000434038
- AMK0000434047
- AMK0000434049
- AMK0000434050
- AMK0000434084
- AMK0000436318
- AMK0000436497
- AMK0000438510AMK0000438511
- AMK0000438512
- AMK0000438966
- AMK0000439813
- AMK0000441884
- AMK0000441911
- AMK0000443503
- AMK0000443506
- AMK0000443921
- AMK0000482480

- AMK0000482501
- AMK0000482511
- AMK0000482562
- AMK0000482563
- AMK0000482574
- AMK0000484709
- AMK0000484711
- AMK0000484712
- AMK0000484714
- AMK0000529723
- AMK0000549962
- AMK0000565892 AMK0000565894
- AMK0000447848
- AMK0000448242

Commissary Clerk

- AMK0000433940
- AMK0000433941
- AMK0000433947
- AMK0000433995
- AMK0000433996
- AMK0000549179

Conductor MBTA

- AMK0000528045
- AMK0000528047
- AMK0000528048
- AMK0000528049

Crew Dispatcher

- AMK0000442366
- AMK0000519038
- AMK0000519045

Customer Relations Representative

- AMK0000442168 AMK0000442169
- AMK0000442170 AMK0000442171
- AMK0000442184 AMK0000442185
- AMK0000442210 AMK0000442211
- AMK0000443584
- AMK0000444836 AMK0000444837
- AMK0000447823

Data Entry Clerk

- AMK0000447650
- AMK0000477651

Dispatcher

AMK0000438174

Electrician

- AMK0000132295
- AMK0000409088
- AMK0000409098
- AMK0000433280
- AMK0000433961
- AMK0000434120
- AMK0000439818
- AMK0000440863
- AMK0000440908
- AMK0000441188
- AMK0000442679
- AMK0000442683
- AMK0000442686
- AMK0000442687
- AMK0000443609
- AMK0000443829
- AMK0000444077
- AMK0000444270
- AMK0000444280
- AMK0000564223
- AMK0000564224
- AMK0000564225AMK0000445403
- AMK0000447840
- AMK0000447841
- AMK0000447842
- AMK0000447843
- AMK0000448236

Food Specialist

- AMK0000433933
- AMK0000435373
- AMK0000442607
- AMK0000560085

Food Specialist/OBS Trainee

• AMK0000560084 – AMK0000560087

Foreman

- AMK0000409130
- AMK0000433282

- AMK0000433759
- AMK0000433784
- AMK0000434043
- AMK0000434044
- AMK0000434093
- AMK0000449691
- AMK0000477445
- AMK0000482468
- AMK0000482469
- AMK0000518650
- AMK0000519044
- AMK0000536727
- AMK0000536792
- AMK0000550050
- AMK0000447838

Inspector

AMK0000409099

Lead Service Attendant

- AMK0000444613
- AMK0000533267
- AMK0000535888
- AMK0000535889
- AMK0000535890
- AMK0000535892 AMK0000535893
- AMK0000535894
- AMK0000535895
- AMK0000535896
- AMK0000535897
- AMK0000535898 AMK0000535899
- AMK0000547190 AMK0000547194
- AMK0000547229 AMK0000547233
- AMK0000547240

Lineman

AMK0000439342

Machine Operator

- AMK0000120350
- AMK0000120400
- AMK0000120428
- AMK0000120430

Machinist

AMK0000409086

- AMK0000409087
- AMK0000409090
- AMK0000434118
- AMK0000446899

Machinist Welder

AMK0000409089

Maintainer

AMK0000435382

Mechanical Welder

AMK0000478013

Motor Equipment Operator

- AMK0000442752
- AMK0000442753
- AMK0000442841
- AMK0000482799
- AMK0000446895
- AMK0000446903

Passenger Conductor

- AMK0000549343
- AMK0000549953
- AMK0000549960
- AMK0000447827
- AMK0000447829
- AMK0000447830

Passenger Engineer

- AMK0000446918
- AMK0000447577
- AMK0000447851
- AMK0000447852

Police Officer

- AMK0000435364
- AMK0000435365
- AMK0000435370
- AMK0000482487
- AMK0000482488
- AMK0000482489

Red Cap

- AMK0000434101
- AMK0000442730

AMK0000482459

Red Cap/Baggageman

AMK0000438453

Repairman

AMK0000442844

RI Clerk

AMK0000066025

Secretary

- AMK0000440699
- AMK0000442242
- AMK0000442417
- AMK0000482551
- AMK0000519014
- AMK0000544545
- AMK0000544580
- AMK0000544605
- AMK0000447575

Sheetmetal Worker

- AMK0000443847
- AMK0000443852
- AMK0000444301
- AMK0000450133
- AMK0000451097
- AMK0000451684

Signalman

- AMK0000448792
- AMK0000448887
- AMK0000450365

Station Cleaner

AMK0000434068

Statistical Clerk

- AMK0000135431
- AMK0000478720 AMK0000478721
- AMK0000482556
- AMK0000562683

Store House Clerk

AMK0000443171

Supervisor

- AMK0000443540
- AMK0000538157

Technician

AMK0000433279

Ticket/Accounting Clerk

- AMK0000433775
- AMK0000442258
- AMK0000443448 AMK0000443449
- AMK0000482460
- AMK0000482461
- AMK0000517992 AMK0000517993
- AMK0000536513
- AMK0000447581

Ticket Sales Clerk

- AMK0000135432
- AMK0000135436
- AMK0000185856
- AMK0000433943
- AMK0000433944
- AMK0000434041
- AMK0000434070
- AMK0000434089
- AMK0000434099
- AMK0000434103
- AMK0000482462
- AMK0000482464AMK0000482465
- AMK0000482470
- AMK0000482471
- AMK0000482493
- AMK0000482504
- AMK0000482568
- AMK0000482571
- AMK0000518134
- AMK0000519693
- AMK0000549273
- AMK0000549278
- AMK0000549279
- AMK0000555724
- AMK0000555726
- AMK0000555728

AMK0000563127

Timekeeper

- AMK0000409088
- AMK0000409098
- AMK0000448999
- AMK0000475627
- AMK0000478068
- AMK0000447872
- AMK0000447959

Trackman

- AMK0000420110
- AMK0000440738
- AMK0000441502
- AMK0000451171

Trackman/B&B Mechanic

- AMK0000439771
- AMK0000441621
- AMK0000441622

Train Attendant

- AMK0000433377
- AMK0000433932
- AMK0000435389
- AMK0000443506
- AMK0000555040
- AMK0000446933

Train Director

- AMK0000482362
- AMK0000482447
- AMK0000503145
- AMK0000549289

Train Dispatcher

- AMK0000438174
- AMK0000438503
- AMK0000438761
- AMK0000440574

Truck Driver

- AMK0000448485
- AMK0000448487

User or Gateman

- AMK0000433781
- AMK0000482465

Utility Worker

- AMK0000433639
- AMK0000433640
- AMK0000433792
- AMK0000434106
- AMK0000435380
- AMK0000435461
- AMK0000436291
- AMK0000436293
- AMK0000433294
- AMK0000439373
- AMK0000443836

Welder

- AMK0000433279
- AMK0000440563

Yardmaster

- AMK0000433773
- AMK0000503352
- AMK0000516492

Interview materials:

Assigned Laborer

- AMK0000491018 AMK0000491032
- AMK0000490984 AMK0000490989

Auto Train Attendant

AMK0000556032
– AMK0000556033

Baggageman

- AMK0000537949 AMK0000537950
- AMK0000566405 AMK0000566406
- AMK0000429337 AMK0000429353

Carman

AMK0000429290 – AMK0000429298

Coach Cleaner

- AMK0000566323 AMK0000566335
- AMK0000484963 AMK0000484971

Communications Officer

- AMK0000531098 AMK0000531101
- AMK0000531123 AMK0000531129

Food Specialist

• AMK0000566363 – AMK0000566366

Foreman

- AMK0000525853 AMK0000525859
- AMK0000528596 AMK0000528605

Inspector

AMK0000528733 – AMK0000528740

Lead Service Attendant

- AMK0000560597 AMK0000560602
- AMK0000538962 AMK0000538965

Lineman

AMK0000529308 – AMK0000529315

Machine Operator

AMK120355- AMK120389

Machinist

AMK0000528148 – AMK0000528152

Motor Equipment Operator

• AMK0000528281 – AMK0000528291

Passenger Engineer

• AMK0000561527 – AMK0000561546

Police Officer

- AMK0000429837 AMK0000429844
- AMK0000429154 AMK0000429166
- AMK0000505109 AMK0000505112
- AMK0000504502

Signal

AMK0000538279 – AMK0000538283

Supervisor

- AMK0000517750 AMK0000517761
- AMK0000531287 AMK0000531293

Ticket Sales Clerk

- AMK0000561034 AMK0000561043
- AMK0000561723 AMK0000561729

Ticket/Accounting Clerk

• AMK116927 – AMK116943

Trackman

AMK0000563805 – AMK0000563815

Trackman/B&B Mechanic

AMK0000278152
– AMK0000278188

Train Attendant

- AMK0000566363 AMK0000566366
- AMK0000565907 AMK0000565909
- AMK0000476412 AMK0000476421

Train Director

AMK0000429751 – AMK0000429755

Train Dispatcher

• AMK0000528231 - AMK0000528242

Yardmaster

AMK0000507652 – AMK0000507664

Depositions (with exhibits):

- Jay M. Finkelman
- Gerri Mason Hall
- Lorraine Greene
- Sheila Davidson
- Earle Stanwood Bagley, Jr.
- Karen Broadwater
- Lee Bullock
- Theodore Campbell
- Peter Loverson
- Gilbert Mallery
- Kevin Marshall
- LaVerne Miller
- Michael O'Connell
- Edward Walker III
- Charles Woodcock
- Annie Blackwell
- Charles White
- Robert Frank
- Thomas Guerin
- Richard Zajic
- Bernard Lee Campbell
- Louis Bellotti
- Jack Wilson
- Barney Blair
- William Hastings
- Wanda Hightower
- Stephen Felder

- Robert Olson
- James Benton Allen
- Fred Roeber
- Patrick Reuter

- Brian BoyceRobert SchmittBurnell Alexander
- Garner Willis
- Daisy Moore
 Alfred Norman Felton, Sr.
 Daphne Pinkey Clark
 Betty Jo Haymer