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PUBLISH

Elisabeth A. Shumaker
Clerk of Court

UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

PERRY APSLEY; BOB BAILEY;
JACOB A. BAKK; GARY BALL;
PEGGY S. BELL; THOMAS BELTON;
MELONDA BIRCHER; JERRY L.
BRANSTETER; MICHAEL E.
BURGARDT; ROCKY R. BURRIS;
DANIEL D. BURROWS; BETTY
CHILDERS; LARRY E. COMBS;
HARVEY J. CONYAC; LOREN W.
COX; PHYLLIS A. COX; LINDA L.
DEZARN; WILLIAM D. DOSHIER;
ALAN S. EPPERSON; LLOYD C.
FANSLER; JERALD J. GILBERT;
RICHARD GOTTHARD; BRIAN
GROOM; DENISE A. HARRIS; RON W.
HENDERSHOT; VERNA J. HOUSTON;
LARRY W. JAMES; GARY L.
JOHNSON; MELVYN J. JOHNSON;
DONALD R. JONES; RALPH O.
KEENER; DANNY R. KENNEDY;
MELVIN E. KERNS; GORDON B.
KINKEAD; JIMMY LE; CARLTON D.
LEE; STEPHEN L. LINCK; FREDDY J.
MCCOLPIN; GLENNYS M.
MONTGOMERY; CATHY J.
MUNSELL; JAN W. MURRAY;
HUYEN T. NGUYEN; LUYEN D.
NGUYEN; KENT W. OWEN;
LOWANDA J. PATTON; PAUL D.
PETE; BRENT L. POPP; JAMES E.
PORTER; JAY E. POWELL; WILLARD
J. RATCHFORD; VERONICA RIOS;
RICHARD D. ROEDER; ALBERT
SCHLOETZER; WILLIAM H.
SETCHELL; JAMES C. SHEPPARD;

DEBRA L. SMITH; SAMMY J. SMITH;
SHARON A. SOUTHERN; LINDA C.
SPARRAR; ABEL L. VASQUEZ;
HENRY F. VICTOR; JAMES R.
WALLACE, Unit Manager; CAROLYN
Y. WHEATON; SYLVESTER
WILLIAMS, II; JANET M. WILSON;
WALTER WOODS; BETTY R.
YOUNG; VERNON L. BENTLEY;
REDELL COLEMAN; CHARLES D.
ELDER; CHIP GILCHRIST, II; JANET
S. HANSEN; JERRY L. MCKINNEY;
JOSEPH E. SCHROEDER; STEVEN M.
SCHWIND; TEDDY F. SILL; CHARLES
STARK; MICHAEL B. WELSH;
CHARLES L. BEAN, JR.; JAMES
HAMMON; ALLEN C. HATCHER;
MARK MCCURDY; STEVEN NGO; BA
PHAM; DONALD E. TITUS; JIMMY
WALLACE; BARBRA ODOM; FRANK
CASH; RICHARD WALLIN; DALE C.
JAYNE, JR.; STEVEN BASIC; ROBERT
W. BOYD; and REGINA SUE
WALKER, individually and on behalf of
those similarly situated,

Plaintiffs - Appellants,

JAMES BOWMAKER; DAVID L.
CLAY; HENRY F. BUTLER; THROMA
A. DYAS; OLIVIA J. HOUSLEY;
SHARRON N. JAMES; WARREN K.
PYLES; DARLENE E. ROZAR; JAMES
WALKER; ROY T. WELLS, individually
and on behalf of those similarly situated,

Plaintiffs,

v.

No. 11-3238

THE BOEING COMPANY; SPIRIT
AEROSYSTEMS,

Defendants-Appellees.

**APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS
(D.C. No. 6:05-CV-01368-EFM-KMH)**

Lawrence W. Williamson, Jr., (Uzo L. Ohaebosim, with him on the brief), of the Williamson Law Firm, LLC, Kansas City, Missouri, for Plaintiffs-Appellants.

James M. Armstrong, (Trisha A. Thelen, Todd N. Tedesco, and Carolyn L. Matthews, with him on the brief), of Foulston Siefkin LLP, Wichita, Kansas, for Defendants-Appellees.

Before **BRISCOE**, Chief Judge, **BALDOCK** and **HOLMES**, Circuit Judges.

BRISCOE, Chief Judge.

I. INTRODUCTION

This case arises from the Boeing Company's ("Boeing") 2005 sale, to Spirit AeroSystems, Inc. ("Spirit"),¹ of facilities in Wichita, Kansas, and Tulsa and McAlester, Oklahoma (the "Wichita Division" or "Division"). On June 16, 2005, Boeing terminated the Division's entire workforce of more than 10,000. The next day, Spirit rehired 8,354

¹ Boeing negotiated the sale with the Onex Corporation, a private-equity firm that formed Mid-Western Aircraft Systems, Inc. Mid-Western changed its name to Spirit in July 2005. We will generally refer to Onex, Mid-Western, and Spirit simply as "Spirit."

employees, who had been selected by Boeing's managers. Although older employees predominated in the workforce both before and after the sale, a lower percentage of older workers than younger ones were rehired.² The plaintiffs (the "Employees") sued, seeking to represent a class of about 700 former Boeing employees who were not hired by Spirit.

The Employees alleged, among other things, that Boeing, Onex, and Spirit (the "Companies") violated the Age Discrimination in Employment Act ("ADEA"), the Employee Retirement Income Security Act ("ERISA"), Title VII of the Civil Rights Act of 1964 ("Title VII"), and the Americans with Disabilities Act ("ADA"). In two separate orders, the district court granted summary judgment on the Employees' Title VII and ADA claims, Apsley v. Boeing Co., No. 05-1368-MLB, 2007 WL 3231526 (D. Kan. Oct. 30, 2007), and their ERISA and ADEA claims, Apsley v. Boeing Co., 722 F. Supp. 2d 1218 (D. Kan. 2010).³ The court denied the Employees' motion for reconsideration. Mem. & Order, Apsley v. Boeing Co., No. 05-1368-EFM (D. Kan. Mar. 28, 2011) (Doc. 365) [hereinafter "Mem. & Order of Mar. 28, 2011"]. The court certified its orders as final judgments under Federal Rule of Civil Procedure 54(b), and the Employees appealed. We have jurisdiction under 28 U.S.C. § 1291, and we affirm.

² Throughout this opinion, the term "older employees" will refer to employees who were age forty or older at the time of the divestiture. "Younger employees" will refer to employees who were under forty.

³ The district court granted summary judgment only as to the Employees' collective ADEA claims based on theories of disparate impact or a pattern or practice of disparate treatment. The Employees still have individual ADEA disparate treatment claims which are pending in district court and which are not at issue here.

II. BACKGROUND

A. Boeing's Decision to Sell the Wichita Division

As part of a strategy to become more competitive, Boeing began in the late 1990s to focus its business on the initial engineering and design, sales and marketing, and final assembly of aircraft. Boeing increasingly outsourced the manufacture of component assemblies to outside suppliers and began to sell off some of its internal manufacturing operations.

One such operation was the Wichita Division. In 2002, Jeff Turner, the Division's general manager, discussed restructuring possibilities with Boeing executives. Restructuring was intended to reduce costs to make the Division competitive with outside suppliers for Boeing contracts. Ultimately, in 2003, Boeing decided instead to sell the Division's assets. Boeing advertised the Division for sale in 2003 and 2004, emphasizing the potential for cost savings and growth under new ownership. The new company would have a long-term supply agreement with Boeing, while cost savings would also make it competitive for non-Boeing business.

The parties' dispute in this case is primarily about how Boeing expected these savings would be achieved. According to the Companies, the new company would save money by paying its employees less and increasing productivity. Boeing believed that the Wichita Division labor contracts provided wages higher than the market required in Wichita, Tulsa, and McAlester. It also considered the Division's job codes to be too narrow and rigid, leading to inefficiencies. It was thought that a new, separate company

would be able to negotiate less costly, more flexible labor contracts.

The Wichita Division's labor costs were also high because of the advanced age and seniority of its workforce. Significant seniority-based layoffs in the early 2000s had eliminated many younger employees, and the average age of the workforce was approximately forty-nine. The Companies, the Employees argue, planned to cut costs by getting rid of older, more expensive workers.

B. Selection of Spirit's Workforce

In 2004, Boeing entered into exclusive negotiations with Onex (the company which later formed Spirit) for the divestiture of the Wichita Division. The Wichita Division employed 10,671 people in June 2005, but Boeing projected that Spirit could still meet the Division's statement of work with only 80 to 90% of the workforce. The parties decided that Boeing management would recommend the most skilled and flexible employees for Spirit to hire. The Companies also agreed that Boeing would be responsible for paying layoff benefits for the employees Spirit did not hire. As a result, they determined that the purchase price would be adjusted upward if Spirit kept less than 90% of eligible employees. Spirit initially asked Division management to select 85% of the workforce; ultimately, management recommended 86.2% and Spirit retained 87.5%.

The Wichita Division's Human Resources personnel developed an evaluation system for managers to use which included the following factors: skills, productivity,

quality, teamwork/attitude, safe work practices, lean,⁴ and corrective action. Managers were given details and examples for each criterion, but they were given no indication of how to weigh the seven factors. They were not instructed to consider employees' past training records, but they were specifically told not to consider age.

The Wichita Division was made up of twenty-nine director groups, which varied in size from a handful of employees to over a thousand. Under each director, one or two levels of managers oversaw the hourly employees. Each level of management was involved in the selection process. Over the course of the first half of 2005, hundreds of meetings took place involving managers and human resources representatives. Typically, an employee's first-level manager gave an initial recommendation, and then other managers who had worked with the employee provided input. The managers eventually agreed on whether or not to recommend the employee. The directors then approved or disapproved the managers' decision, and a panel reviewed the directors' determinations.⁵

Near the end of the selection process, human resources representatives conducted an internal study to assess how racial minorities, women, and older individuals were faring under the selection process. The study showed that all three categories were being adversely impacted. The Companies have stated that they "did not equate these differences with discrimination or any other reason," Aplee. Supp. App. at 1094, but after

⁴ "Lean" referred to an employee's aptitude for eliminating waste and promoting efficiency.

⁵ The selection process at the smaller Oklahoma facilities was slightly different, but the distinctions are not relevant here.

the study was conducted, “there were some additional recommendations of employees to be hired in organizations where there were differences in the selection rate as it related to race or gender,” *id.* “There were no adjustments made based on any differences as they related to the age of the workforce in a particular group.” *Id.*

C. Pension Negotiations

While Division managers were selecting Spirit’s workforce, Spirit and its consultants were working out the new company’s pension plan. Once employees were terminated from Boeing, they could no longer accrue additional benefits under its plans. As for benefits that were already accrued, the Companies agreed that Spirit would assume Boeing’s pension liabilities at the close of the sale for the employees it hired, as long as Boeing transferred sufficient funds to cover them. Boeing would remain responsible for the pensions of employees Spirit did not hire.

Spirit also decided to set up a new pension plan for its employees. Spirit negotiated with the International Association of Machinists (“IAM”), and agreed to contribute to the IAM National Pension Fund (“NPF”), a joint labor-management multiemployer pension fund. According to the schedule used by the NPF, an employer entering the fund when Spirit did would ordinarily have to contribute \$1.35 for each hour worked by each eligible employee. But because Boeing’s workforce was atypically old, with many employees approaching or already past the retirement age of fifty-five, the NPF’s actuaries calculated that Spirit’s rate would be \$1.65. Spirit took the position that it should pay the lower rate because it believed the average age of its workforce would

decrease over time. In the end, Spirit and the NPF agreed that Spirit would pay a rate of \$1.35, but it would place an additional \$.30 per hour in an escrow account. In 2010, the NPF would determine whether \$1.35 or \$1.65 was the correct rate. Due, apparently, to a change in its policies, the NPF determined in January 2006 that Spirit was no longer required to make the additional payment, and returned the escrowed funds.

D. Spirit's Workforce Demographics

The sale closed on June 16, 2005. On that day, Boeing terminated its entire Wichita Division workforce of 10,671 employees. The next day, 8,354 of them were hired and came to work as Spirit's Day One workforce. Employees over forty were recommended and rehired⁶ at slightly lower rates, overall, than employees under forty. The average age of Spirit's workforce was 48.2, about five months younger than the Wichita Division workforce was the day before.

E. District Court

The Employees, individually and on behalf of a class, sued Boeing, Onex, and Spirit, alleging violations of federal law in seven counts. They alleged age discrimination in violation of the ADEA, under theories of pattern or practice of disparate treatment and disparate impact (Count I); interference with ERISA rights (Count IV); and retaliation

⁶ Some employees who received offers transferred to other Boeing locations or retired from Boeing and did not come to work for Spirit. As a result, more employees were recommended for hire than were actually rehired.

(Count VII).⁷ The Employees also sought declaratory judgments on several issues (Counts II and III); alleged a breach of contract in violation of the Labor Management Relations Act (Count V); and sought injunctive and equitable relief relating to their other claims (Count VI). The district court conditionally certified a class claim on the Employees' ADEA count. Apsley, 2007 WL 3231526, at *2.

In response to three motions filed by the Companies, the district court dismissed all of the Employees' claims except their individual claims of disparate treatment under the ADEA. In their first motion, the Companies sought judgment on the pleadings on Counts II, III, and IV under Federal Rule of Civil Procedure 12(c). The court dismissed Counts II and III, which sought declaratory judgments that the Companies had failed to keep proper records and had used improper consent forms. Id. at *3. The court refused to dismiss Count IV, in which the Employees alleged that the Companies had worked together to prevent the Employees from obtaining and receiving pension benefits in violation of ERISA § 510, 29 U.S.C. § 1140. Mem. & Order at 10–11, Apsley v. Boeing Co., No. 05-1368-MLB (D. Kan. Dec. 18, 2006) (Doc. 139) [hereinafter "Mem. & Order

⁷ The Employees' retaliation claim mentions females and minorities who have complained of discrimination, so the district court took this count to allege retaliation under Title VII. Apsley, 2007 WL 3231526, at *1. In addition, the district court understood it to allege retaliation under the ADA because it referred to individuals who exercised disability rights. Id.

The district court noted that Count VII also mentioned retaliation relating to workers' compensation, FMLA rights, and whistle-blowing, but it did not analyze these aspects of the claim separately. Id. The Employees have not challenged the district court's treatment of these issues on appeal.

of Dec. 18, 2006”].

The Companies next filed a narrow motion for summary judgment based on the Employees’ failure to exhaust administrative remedies. This motion, which the court granted, was limited to (1) ADEA claims arising from conduct that predated the asset sale and (2) claims for retaliation under Title VII and the ADA. Apsley, 2007 WL 3231526, at *3.

Finally, the Companies moved for summary judgment on the Employees’ claims under the ADEA and ERISA. The court granted the motion in full as to the ERISA claim, and as to two of the Employees’ three ADEA claims: their collective action claim for a pattern or practice of intentional age discrimination and their individual and collective disparate impact claims. Apsley, 722 F. Supp. 2d at 1249.

The Employees filed a motion for reconsideration, which the district court denied. Mem. & Order of Mar. 28, 2011. Although the Employees’ individual claims for disparate treatment in violation of the ADEA remained unresolved, the district court granted the parties’ motions for certification of its prior orders for review by this court under Rule 54(b). Mem. & Order, Apsley v. Boeing Co., No. 05-1368-EFM (D. Kan. July 11, 2011) (Doc. 384).

III. ANALYSIS

We review de novo the district court’s decisions granting summary judgment for the Companies, Adler v. Wal-Mart Stores, Inc., 144 F.3d 664, 670 (10th Cir. 1998), and we view the record in the light most favorable to the Employees, Westland Holdings, Inc.

v. Lay, 462 F.3d 1228, 1229 (10th Cir. 2006). Although the Employees have provided evidence that discrimination occurred during Boeing’s divestiture of the Division, we agree with the district court that the Employees cannot prove a pattern or practice of age discrimination. And while older employees fared slightly worse than younger ones in the divestiture, the Employees are unable to show that the Companies’ hiring practices had a significant disparate impact on older workers. We also agree with the district court that the Employees cannot show that the Companies acted with the specific intent to interfere with their attainment of pension benefits. Finally, we see no error in the district court’s dismissal of the Employees’ retaliation claims.

A. Pattern or Practice Under the ADEA

Under the ADEA, a class of plaintiffs proceeding under a pattern or practice theory must first make a prima facie showing that “unlawful discrimination has been a regular procedure or policy followed by an employer or group of employers.” Thiessen v. Gen. Elec. Cap. Corp., 267 F.3d 1095, 1106 (10th Cir. 2001) (quoting Teamsters v. United States, 431 U.S. 324, 360 (1977)). If they succeed, “[t]he burden then shifts to the employer to defeat the prima facie showing of a pattern or practice by demonstrating that the plaintiffs’ proof is either inaccurate or insignificant.” Id. (quoting Teamsters, 431 U.S. at 360) (alteration omitted). “If an employer fails to rebut the inference that arises from the [plaintiffs’] prima facie case,’ the finder of fact can conclude ‘that a violation has occurred’ and the trial court can award prospective equitable relief.” Id. (quoting Teamsters, 431 U.S. at 361).

“If the plaintiffs also seek ‘individual relief for the victims of the discriminatory practice,’ the case moves into the second or subsequent stages.” *Id.* (quoting *Teamsters*, 431 U.S. at 361). “In these additional proceedings, it must be determined whether each individual plaintiff was a victim of the discriminatory practice. Importantly, by having prevailed in the first stage of trial, the individual plaintiffs reap a significant advantage for purposes of the second stage: they are entitled to a presumption that the employer had discriminated against them.” *Id.*

The district court concluded that the Employees’ statistics did not establish a prima facie case of a pattern or practice of discrimination. *Apsley*, 722 F. Supp. 2d at 1238–40. It also considered the Employees’ statistical, circumstantial, and anecdotal evidence as a whole and held that it was “insufficient to establish a pattern or practice of age discrimination.” *Id.* at 1245. The Employees argue that they presented sufficient evidence to raise a triable issue of fact on this claim. They rely on statistics; statements from Boeing managers; discussions between Spirit and its consultants; Dr. Goldberg’s expert opinions, especially regarding the subjective nature of the selection process; and the Companies’ documentation of employees’ ages. We will discuss each category of evidence in turn.

1. Statistics

“[G]ross statistical disparities . . . alone may in a proper case constitute prima facie proof of a pattern or practice of discrimination.” *Hazelwood Sch. Dist. v. United States*, 433 U.S. 299, 307–08 (1977) (discussing statistics in Title VII context). Even where the

disparities are less striking, statistical evidence may be combined with “historical, individual, or circumstantial evidence” to establish a pattern or practice. Pitre v. W. Elec. Co., 843 F.2d 1262, 1267 (10th Cir. 1988). Statistics must always be evaluated in the context of “all of the surrounding facts and circumstances.” Teamsters, 431 U.S. at 340 (discussing statistics in a Title VII case).

The Employees’ statistical evidence was prepared by an expert, Dr. Charles Mann.⁸ Dr. Mann analyzed employee demographics with regard to the Companies’ recommendations as well as their hiring outcomes, and he provided results by director group and in the aggregate. The district court summarized Dr. Mann’s results as follows:

Dr. Mann’s recommendation analysis considered the recommendation decisions of twenty-nine director groups that had at least one hire or non-hire. The recommendation decisions of eight of these director groups were uninformative⁹ and, thus, were not studied. Of the remaining twenty-one director groups, Dr. Mann found that only four had statistically significant differences adverse to older employees.^{FN51} Dr. Mann’s report showed, though, that in all but five of the director groups, workers over the age of 40 were not recommended at a rate higher than workers under the age of 40.

^{FN51} These four director groups contained only 35% of the older employees who were not recommended for hire.

Viewing the recommendation decisions of the director groups as a whole, Dr. Mann found that workers over the age of 40 were adversely affected at a statistically significant level. According to Dr. Mann, the

⁸ The Companies submitted their own expert’s report, but they did not rely on it for summary judgment purposes, and the district court therefore did not consider it. Apsley, 722 F. Supp. 2d at 1238 n.53. We do not consider it either.

⁹ Dr. Mann considered “uninformative” the groups in which all the employees were older or no employees were deselected; these groups did not offer any way to compare results between the older and younger employees. Aplt. App. at 610 n.1.

difference between the number of people over the age of 40 that his model predicted would be recommended (8,028) and the number that was actually recommended (7,968) was greater than five standard deviations. This number of standard deviation correlates with a 1 in 50,000 chance that the results observed were the product of random occurrence. Dr. Mann did not offer an opinion as to what caused this difference.

With respect to his outcome analysis, Dr. Mann considered the outcome decisions of twenty-eight director groups that had at least one hire or non-hire. The outcome decisions of nine of these directors were uninformative and, thus, were not studied. Of the remaining nineteen director groups, Dr. Mann found that only three had statistically significant differences adverse to older employees.^{FN52} Dr. Mann's report showed, though, that in all but one of the director groups, workers over the age of 40 were not recommended at a rate higher than workers under the age of 40.

^{FN52} These three director groups contained only 20% of the older workers that were not hired by Spirit.

Viewing the outcome decisions of the director groups as a whole, Dr. Mann found that workers over the age of 40 were adversely affected at a statistically significant level. According to Dr. Mann, the difference between the number of people over the age of 40 that his model predicted would be hired (7,285) and the number that was actually hired (7,237) was over four and a half standard deviations. This number of standard deviations also correlates with a 1 in 50,000 chance that the results observed were the product of random occurrence. Dr. Mann did not offer an opinion as to what caused this difference.

In response, Defendants contend that Plaintiffs' statistical evidence is insufficient to establish a pattern or practice of age discrimination. Specifically, Defendants point out that in neither analysis did Dr. Mann report statistically significant disparities adverse to workers over the age of 40 in more than four of the twenty-plus director groups he studied. They also direct the Court's attention to the fact that, out of the thousands of employees recommended for hire or actually hired, if Defendants would have recommended sixty more workers over the age of 40 or hired forty-eight more workers over the age of 40, workers over the age of 40, in the aggregate, would not have been adversely affected at a statistically significant level.

Apsley, 722 F. Supp. 2d at 1237–38 (footnote omitted).

The district court agreed with the Companies, concluding that the Employees' statistics were "insufficient to establish a prima facie case of pattern-or-practice age discrimination," whether considered by director group or in the aggregate. Id. at 1238. With regard to individual groups, the district court concluded that "in order for Dr. Mann's director-group statistics to establish a pattern or practice of discrimination, they would, at a minimum, have to show that in a significant number of director groups older workers were adversely affected at a statistically significant level." Id. at 1238–39. The district court also considered the Employees' aggregated results. It noted that "some courts have held that when the plaintiff's statistics show a disparity between the expected value and the actual value greater than four or five standard deviations, the plaintiff has established a prima facie case of disparate treatment." Id. at 1239. Here, however, the court emphasized that it was "looking at thousands of hiring decisions, not hundreds." Id.

Due to this large sample, de minimus disparities may become statistically significant. Here, Dr. Mann's model predicted that out of over 9,000 recommendations decisions, sixty more Boeing workers over the age of forty should have been recommended. Similarly, Dr. Mann's model predicted that out of over 8,000 hires, forty-eight more workers over the age of 40 should have been hired. Stated another way, Boeing recommended and Spirit hired over 99% of the workers that Dr. Mann's model predicted. The Court finds this disparity to be practically insignificant, and, as a consequence, that Plaintiffs' aggregate results also do not establish a prima facie case of age discrimination.

Id. (footnotes omitted). The court also noted that "the percentage of Spirit's Day One workforce that was over the age of 40 (86.6%) is nearly identical to the percentage of workers who were considered for hire that were over the age of 40 (87.4%)." Id.

The Employees contend that the district court misinterpreted their statistical evidence. In particular, they challenge the district court's conclusion that even though the Employees' aggregated statistics showed a disparity between older and younger workers that was statistically significant, the disparity lacked "practical significance." This is, in the end, a case that turns largely on the statistics. Accordingly, we begin our review of the district court's conclusions with a brief discussion of the key statistical concepts at issue.

Older workers were recommended and hired by Spirit at lower rates than were younger workers. This fact alone, of course, does not necessarily mean that any discrimination occurred, much less that a pattern or practice of discrimination existed. A completely age-neutral process could, purely by chance, have resulted in fewer older employees being recommended or hired. The Employees' statistical evidence was offered to demonstrate that a nondiscriminatory process would have been highly unlikely to yield the observed disparities. In Carpenter v. Boeing Co., 456 F.3d 1183, 1202 (10th Cir. 2006), we used a hypothetical coin-flip experiment to illustrate related statistical concepts. We find the same approach instructive here.

"Consider an experiment involving 1,000,000 flips of a coin." Id. "The canonical result, of course, would be 500,000 heads and 500,000 tails." Id. Assume that, instead, the observed results were 510,000 heads and 490,000 tails. To determine whether the coin was fair, a statistician could model the results one would expect to obtain if one assumed that heads and tails were equally likely on each flip. See Ramona L. Paetzold &

Steven L. Willborn, The Statistics of Discrimination § 9:2 (2011) [hereinafter “Paetzold & Willborn”] (defining a “fair coin” as one that will “have an equal chance of turning up heads or tails on each toss”). We will refer to this assumption as the “null hypothesis.” See David H. Kaye & David A. Freedman, “Reference Guide on Statistics,” in Reference Manual on Scientific Evidence (3rd ed. 2011) [hereinafter “Kaye & Freedman”] at 249. If one were to model the results of conducting the million-flip experiment many times with a fair coin, most of the results would approach an even heads-to-tails distribution. But one would also expect to find a certain number of anomalous results—where, by pure chance, a fair coin landed much more often on either heads or tails. The model would reveal the actual observed result—510,000 heads—to be extremely unlikely. “Although the magnitude of the difference is small, only about 4% more heads than tails, the odds of such a difference occurring in the absence of a weighted coin are exceedingly small—the departure from equality is 20 standard deviations.” Carpenter, 456 F.3d at 1202.

The odds of such a difference occurring can be referred to as the probability, or p -value. “If p is small, the observed data are far from what is expected under the null hypothesis—too far to be readily explained by the operations of chance. That discredits the null hypothesis.” Kaye & Freedman at 251. In other words, in the coin example, “[t]he difference strongly indicates some influence on the results other than the operation of pure chance.” Carpenter, 456 F.3d at 1202 (emphasis in original). The coin, a statistician could conclude, was not fair. See Paetzold & Willborn § 4:11 (applying these principles to a sex discrimination example).

In the present case, we understand Dr. Mann to have tested the null hypothesis that older workers were no less likely to be recommended or hired than younger workers.¹⁰ Dr. Mann used a model to predict how many older employees should have been recommended and hired, which he could compare with the actual observed results. This allowed him to determine how likely it was—assuming the process was not biased against older employees—that Spirit would end up with a workforce age distribution that was, for older employees, as bad as or worse than the one that occurred.

Dr. Mann analyzed the Companies' recommendations and hires with regard to the workforce in the aggregate, as well as in some smaller units, including by director group.¹¹ The *p*-value was very low when the workforce was considered in the aggregate. Dr. Mann calculated that, taking the workforce as a whole, both for recommendations and for outcomes, there was less than one chance in 50,000 that a process not actually weighted against older employees would provide results as bad as or worse than the observed results. When Dr. Mann broke his analysis down by director group, he found low *p*-values in only a small number of groups.

Like most courts approaching similar cases, the district court discussed the

¹⁰ Dr. Mann was conducting a one-tailed test, which looked only at whether older employees were treated less favorably to a statistically significant degree. Thus, he was not testing whether older and younger employees were treated equally. That hypothesis would have been appropriate for a two-tailed test. See Aplee. Supp. App. at 1399 (Dr. Mann's deposition).

¹¹ The district court only discussed the aggregate and director group statistics, and neither party relies on the other results on appeal. Mem. & Order of June 30, 2010 at 23 n.50.

evidence in terms of statistical significance and standard deviations. Statistical significance is a term of art which describes the point at which a p -value is low enough that the null hypothesis should be rejected. Kaye & Freedman at 251. “Statistical significance is determined by comparing p to a preset value, called the significance level. The null hypothesis is rejected when p falls below this level.” Id. The significance level is typically placed at 5%. Standard deviations are simply a way of expressing p -values in certain situations. Id. at 251 n.101.

The Supreme Court has instructed, in the context of grand juror selection, that “[a]s a general rule . . . , if the difference between the expected value and the observed number is greater than two or three standard deviations, then the hypothesis that the jury drawing was random would be suspect to a social scientist.” Castaneda v. Partida, 430 U.S. 482, 496 n.17 (1977); see also Hazelwood, 433 U.S. at 311 n.17 (noting, in a Title VII case, that “a fluctuation of more than two or three standard deviations would undercut the hypothesis that decisions were being made randomly with respect to race”). Under the model used in Castaneda, “two or three standard deviations” is equivalent to “ p -values of about 5% and 0.3% when the statistic is normally distributed.” Kaye & Freedman at 251 n.101. In other words, the reference to two standard deviations in that case described a one-in-twenty chance that the observed results would be obtained if the null hypothesis—that jury selection was conducted at random, without regard for race—were true.

The district court phrased some of Dr. Mann’s results in terms of standard

deviations.¹² It noted that the difference between predicted and actual recommendations was greater than five standard deviations, while the difference between predicted and actual hires was greater than four-and-a-half deviations. Apsley, 722 F. Supp. 2d at 1237–38. As the district court recognized, these results typically would be considered statistically significant. Castaneda, 430 U.S. at 496 n.17.

Nonetheless, the district court concluded that this was a case where “a large number of standard deviations simply will not be enough.” Apsley, 722 F. Supp. 2d at 1239. In the passages excerpted above, the court reasoned that small discrepancies in large samples mean little even if they are statistically significant. The court noted that any discrepancy would have disappeared if Boeing had recommended sixty more older workers or if forty-eight more older workers had been hired by Spirit. It also pointed out that “Boeing recommended and Spirit hired over 99% of the workers that Dr. Mann’s model predicted.” Id. Thus, it concluded that any disparity was “practically insignificant.” Id.

The Employees argue that the district court was wrong to disregard statistical significance on the basis that their evidence lacked practical significance. The

¹² In the report the Employees cite, Dr. Mann offered his results in terms of probabilities, not standard deviations, and he explained that standard deviations are not relevant in this case because the test he used, the Fisher Exact Test, does not assume a normal distribution of results. Aplee, Supp. App. at 1401. He noted, however, that the standard of significance he used—5%—was derived from the Hazelwood court’s reference to two standard deviations in a case that did assume normal distribution, or about a one in twenty chance. Id.

Companies, in their response brief, cite no cases supporting a formal “practical significance” requirement at the summary judgment stage.¹³ The district court, however, cited several secondary sources which have cautioned that in large samples, relatively small discrepancies may become statistically significant. *Id.* at 1239 n.59. Quoting Kaye & Freedman’s second edition, the district court reasoned that “[w]hen practical significance is lacking—when the size of the disparity or correlation is negligible—there is no reason to worry about statistical significance.” *Id.* at 1239 n.60. The disparities upon which the Employees rely are indeed small in light of the thousands of total hires and recommendations at issue. But just as a relatively small percentage difference between heads and tails would be quite surprising in the million-coin-flip experiment, what is noteworthy here is that the observed disparity persisted over the course of eight or nine thousand individual recommendations and offers. We are suspicious of the Companies’ selective rehire practices for the same reason we would suspect a coin that

¹³ The Employees erroneously assert that the Third Circuit has said “‘practical’ significance has . . . not been adopted by any court in this country.” *Aplt. Br.* at 43 (citing *Stagi v. Nat’l RR Passenger Corp.*, 391 F. App’x 133, 140 (3d Cir. 2010) (unpublished)). In fact, the *Stagi* court noted that “some courts have adopted” the test, but that “no Court of Appeals . . . has found ‘practical significance’ to be a requirement for a plaintiff’s prima facie case of disparate impact.” *Stagi*, 391 F. App’x at 139. Even so, the Third Circuit did point to a Second Circuit case, *Waisome v. Port Authority*, 948 F.2d 1370, 1375–77 (2d Cir. 1991), which endorsed a kind of practical significance approach. In *Waisome*, the court noted a statistically significant disparity of 2.68 standard deviations between the examination passage rates of white and black candidates. *Id.* at 1375. But it rejected the practical importance of the figure because “if two additional black candidates passed the written examination the disparity would no longer be of statistical importance.” *Id.* at 1376.

came up heads 510,000 out of 1,000,000 times. In other words, it is precisely because we are looking at thousands of hiring decisions that the statistics are noteworthy.¹⁴

Furthermore, we note that the district court's approach to determining the legal significance of statistics has been criticized by one of the very sources the court relied on. The district court quoted section 12:03 of Paetzold & Willborn's 2002 edition for the proposition that "[s]tatistical significance is affected by the number of observations, so that for large samples, spurious significance can result." But in the 2011 edition of their treatise, after discussing the tendency of some courts to ascribe too much weight to statistical evidence, Paetzold & Willborn note:

Courts have also erred on the other side of the continuum by failing without good reason to credit statistical evidence. In Apsley v. Boeing, for example, the court rejected a statistical showing of age discrimination because if 48 more people over 40 has been hired or 60 more had been recommended for hire, the results would no longer have been statistically significant. This approach has little to recommend it; any showing of statistical significance can be avoided by positing the existence of some random number of counter-events that did not occur.

Paetzold & Willborn § 4.03 (2011). Thus, we acknowledge that the Employees' concerns are not wholly baseless.

Despite these grounds for criticizing the district court's analysis, however, we

¹⁴ The Fourth Circuit has provided a coin-toss illustration of this principle as well. "[B]y increasing the absolute numbers in the data, chance will more readily be excluded as a cause of any disparities found. For example, if a coin were tossed ten times in the first day and came up heads four times, no one would think the coin was biased (0.632 standard deviations), but if this same ratio occurred for a total of 10,000 tosses, of which 4,000 were heads, the result could not be attributed to chance (20 standard deviations)." Lilly v. Harris-Teeter Supermarket, 720 F.2d 326, 336 n.17 (4th Cir. 1983).

cannot conclude that the district court erred in granting summary judgment for the Companies. The Employees “bore the initial burden of making out a prima facie case of discrimination.” Teamsters, 431 U.S. at 336. Because they “alleged a systemwide pattern or practice,” they “had to prove more than the mere occurrence of isolated or accidental or sporadic discriminatory acts.” Id. (internal quotation marks omitted). To overcome summary judgment, they had to introduce sufficient evidence to allow a rational juror to conclude “by a preponderance of the evidence that racial discrimination was the [Companies’] standard operating procedure—the regular rather than the unusual practice.” Id. The statistical evidence before us would not permit any reasonable trier of fact to resolve this matter in the Employees’ favor.

To the contrary, we agree with the district court that the Employees’ statistics suggest, at most, isolated or sporadic instances of age discrimination. See Apsley, 722 F. Supp. 2d at 1245 (“Although Plaintiffs have produced evidence that may indicate that discrimination did occur during the divestiture, they have failed to put forth the ‘substantial proof’ necessary to show that intentional age discrimination was Defendants’ standard operating procedure.” (quoting King v. Gen. Elec. Co., 960 F.2d 617, 624 (7th Cir. 1992))). As the district court properly noted, the Employees’ own figures show that the Companies recommended and hired over 99% of the older employees they would have been expected to recommend and hire in the absence of any discrimination. Id. at 1239. While this disparity might still lead a social scientist to suspect that the divestiture process was not wholly free of age-based discrimination, Castaneda, 430 U.S. at 496

n.17, it would not permit a jury to find that such discrimination was the Companies' standard operating procedure, Teamsters, 431 U.S. at 336.

Like the district court, we find further support for this conclusion in the fact that older employees made up a similar percentage of the Companies' workforce immediately before and after the divestiture. Apsley, 722 F. Supp. 2d at 1239–40. In Equal Employment Opportunity Commission v. McDonnell Douglas Corp., the Eight Circuit noted that “an important statistic to consider in the [reduction in force (‘RIF’)] context is the difference in the percentage of older employees in the work force before and after the RIF.” 191 F.3d 948, 952 (8th Cir. 1999). In that case, the court characterized as “insignificant” a drop in older employees from 14.7% of the workforce to 13.6%. Id. The decline in this case—from 87.4% to 86.6%—was even smaller.

The district court also concluded that Dr. Mann's evidence, broken down by director group, failed to prove a pattern or practice of discrimination. The district court reasoned that the Employees “would, at a minimum, have to show that in a significant number of director groups older workers were adversely affected at a statistically significant level.” Apsley, 722 F. Supp. 2d at 1239–40. We note that this analysis has not escaped academic criticism either. See Joseph L. Gastwirth et al., Some Important Statistical Issues Courts Should Consider in Their Assessment of Statistical Analyses Submitted in Class Certification Motions: Implications for Dukes v. Wal-Mart, 10 Law, Probability & Risk 225, 234 (2011) (pointing out that even if Boeing had hired only employees under 40 in every single director group, “statistical significance [would]

not occur in a majority of the units”); cf. Capaci v. Katz & Besthoff, Inc., 711 F.2d 647, 654 & n.4 (5th Cir. 1983) (criticizing defendants’ “divide and conquer” approach to statistical evidence, under which “it became impossible to demonstrate significance with such small numbers in many instances, since even a record of hiring or promoting zero women would not yield statistically significant results”). The Employees, however, ask us to focus not on their director-group statistics, but rather on their company-wide aggregated data. See Aplt. Br. at 39 (“The only way to ensure that the proper population is analyzed is to aggregate data.”); id. at 42 (“[S]tatistics cannot be used to determine whether there is a company-wide policy in effect unless it [sic] considers the entire company.”). As we have explained, that data is insufficient “in light of all the surrounding facts and circumstances.” Teamsters, 431 U.S. at 340.¹⁵

¹⁵ One final note is in order regarding the Employees’ statistical evidence. In the facts section of their brief, the Employees state that the percentage of older employees in Spirit’s workforce continued to fall after the divestiture, from 87.4% on the day Spirit took over to 74.67% two-and-a-half years later. Aplt. Br. at 28. The district court declined to consider these figures, concluding that the Employees had shown no “logical connection” between the Companies’ actions before and after the divestiture. Apsley, 722 F. Supp. 2d at 1240 n.61 (citing Bingman v. Natkin & Co., 937 F.2d 553, 556–57 (10th Cir. 1991)).

On appeal, the Employees offer no legal argument in response. They simply assert—also in their facts section—that “[t]his demographic trend was not accidental” and that “[p]art of the plan was to hire new workers, even as they were in the process of letting the older workers go, and to continue to hire people, even after the reduction.” Aplt. Br. at 27–28. Without more, these statements are inadequate to present the issue for our consideration. See Exum v. U.S. Olympic Comm., 389 F.3d 1130, 1133 n.4 (10th Cir. 2004) (“Plaintiff did not mention these issues anywhere in the argument section of his brief on appeal. They have therefore been waived. . . . Scattered statements in the appellant’s brief are not enough to preserve an issue for appeal. Appellees are not

(continued...)

2. Statements About Older Employees

We have held that even where “the statistical disparity is insufficient alone to establish a prima facie case, the plaintiff may get over his or her initial hurdle by combining statistics with historical, individual, or circumstantial evidence.” Pitre, 843 F.2d at 1268 (quotation omitted). The Employees seek to supplement their statistical evidence with other evidence that they claim demonstrates a pattern or practice of discrimination. In particular, they cite statements the Companies’ managers and consultants made before, during, and after the asset sale. Most of these statements have to do with the Companies’ concern that the workforce was aging and their desire to save money on pension costs. For the most part, this evidence fits into three general categories: (1) statements made by Boeing managers and executives having to do with the economic health and prospects of the Wichita Division; (2) comments workers heard from lower-level managers; and (3) communications between Onex/Spirit executives and their consultants having to do with pension contributions. None of this evidence bolsters the Employees’ statistical showing sufficiently to preclude summary judgment for the Companies.

a. Statements by Boeing Managers and Executives About the Economic Health of the Wichita Division

Jeffrey Turner was the general manager of the Wichita Division under Boeing, and

¹⁵(...continued)
expected to respond to every grievance that may be alluded to in the appellant’s statement of facts.” (citations omitted)).

he became Spirit's chief executive officer after the asset sale. The Employees note that Turner "believed an older workforce was indicative of an unhealthy business and was very concerned about the aging workforce." Aplt. Br. at 11. He discussed these concerns in meetings with management.

In his deposition, Turner provided innocuous explanations for his concerns. He explained that an aging workforce indicates that a business is not growing, because it suggests the business is not hiring new employees. Under those circumstances, new employees are not being trained by experienced ones. Turner also noted a related problem—because so many workers were in the older age range, a large proportion of the workforce could retire at the same time, suddenly leaving the company without experienced employees to train new ones. In response, the Employees offer nothing to suggest that Turner's concerns had anything to do with discriminatory stereotypes or even a desire to get rid of, rather than hold onto, older employees. See Hazen Paper Co. v. Biggins, 507 U.S. 604, 610 (1993) ("It is the very essence of age discrimination for an older employee to be fired because the employer believes that productivity and competence decline with old age."). We are mindful that "mere protestations of lack of discriminatory intent and affirmations of good faith do not suffice to rebut a prima facie case." Hill v. Metro. Atlanta Rapid Transit Auth., 841 F.2d 1533, 1539 (11th Cir. 1988) (citing Castaneda, 430 U.S. at 499 n.19). But under the circumstances of this case—particularly given the high percentage of older workers Spirit retained—we do not think any rational trier of fact could take Turner's statements, in context, as evidence of

the Companies' intent to get rid of older employees.

The other statements the Employees rely on from upper-level management are no stronger. The Employees point, for example, to a director's comments "that potential buyers would be looking at the age of the workforce and it would affect their decision to purchase the company." Aplt. Br. at 15. We agree with the district court that this sort of observation "merely reflects a fact of life," Mem. & Order of Mar. 28, 2011 at 7, and does not suggest discrimination.

b. Statements from Lower-Level Management

The Employees also point to lower-level supervisors' comments. One manager said that older employees should "look to retirement" and another manager made "continuous comments that the workforce was getting older." Aplt. App. at 831. "Less than one month before the divestiture, Plaintiff Charles Stone's supervisor, Tim Parks, said Mr. Stone was going to be terminated with the 'old fuckers.'" Id. at 762. A manager said "that employees were too old to do certain work asked of them." Id. at 873. A manager said "that those old enough to retire should consider retiring because new management for [the new company] would scrutinize the performance of older workers." Id. at 739. A manager went around and asked all individuals over 55 when they intended to retire. Id. at 877. An employee said that a human resources representative told him he was being terminated for lack of productivity, but also said that he was actually being terminated because of his age. Id. at 750. An employee said that a supervisor said the "current workforce was older and aging and younger people could do thing[s] faster and

more efficiently.” Id. at 771. An employee said that a supervisor asked if he was going to take his retirement in March 2005 and, when he said he had no plans to do so, she said he “better rethink that position and retire.” Id. at 843. Finally, a supervisor “brought up several times that the average age of the workforce was to [sic] high and if Boeing wanted to stay competitive, they had to get that age down.” Id. at 889. We need not discuss each of these comments individually. Some of them certainly provide evidence that there were lower-level managers at Boeing who held discriminatory stereotypes with regard to older workers.

Although the Employees present no evidence that any manager actually acted on these attitudes, cf. Pitre, 843 F.2d at 1270, we acknowledge that the comments suggest some discrimination may have occurred. Nonetheless, this is not a case where anecdotal evidence complements a statistical showing of discrimination to “br[ing] the cold numbers convincingly to life.” Teamsters, 431 U.S. at 339. Rather, across a workforce of over 10,000 people in three locations, the handful of statements the Employees cite constitute only evidence of “isolated or sporadic discriminatory acts by the employer[, which are] insufficient to establish a prima facie case of a pattern or practice of discrimination.” Cooper v. Fed. Reserve Bank of Richmond, 467 U.S. 867, 875–76 (1984).

c. Communications Between Spirit and its Consultants

The Employees also cite a number of communications between Spirit and its consultants which seem to show that the company expected to reduce the age of its

workforce. These communications, which took place in the context of negotiations with the IAM NPF over pension contributions, show that Spirit was assuming it would operate with a younger and less expensive workforce. See Aplt. App. at 420 (“[A]ll costs are estimated on the basis of the current Wichita Div. workforce, which is almost certainly older and more expensive than the workforce [Spirit] will have going forward.”). They also show that Spirit assumed that workers forty-five to fifty-four years old were the most expensive; for purposes of modeling future costs, one email noted “we need to move employees out of this age range.” Id. at 410. Emails among Spirit managers and consultants discussed the demographic changes that would have to occur for the NPF to lower pension contribution rates, such as decreasing average service by five years and decreasing average age by seven years over the course of three or five years. Id. at 422–23. A managing director at Spirit wrote: “Since we are moving from a demographically expensive population towards one that should be cheaper, we will be arguing that this trend should be reflected in the original cost per \$ benefit.” Id. at 408.

The district court considered these communications to be irrelevant because they had to do with pension negotiations, not hiring decisions. Management in Wichita—which made the hiring recommendations—was not involved in the negotiations over pension costs. Apsley, 722 F. Supp. 2d at 1241 n.64. On appeal, the Companies also argue that the consultants’ assumptions were, in any event, benign. They point to a negotiator’s declaration that Spirit anticipated a demographic shift “as retiring employees were replaced by new workers” and because the company expected to grow its business

and hire large numbers of new workers. Aplee. Br. at 11–12. They also note that the cited communications include a note that Spirit “will need to hire experienced workers (i.e., older) in order to ramp up production in the early years.” *Id.* at 12.

To the extent that the parties’ conflicting interpretations of the foregoing statements could contribute to the Employees’ prima facie case, we conclude that no genuine issue of material fact can remain in light of the statistical evidence. The Companies note that the average age of Spirit’s Day One workforce was only slightly lower than Boeing’s had been. Aplee. Br. at 28. The average age of all Wichita Division employees on June 16, 2005 was 48.6 years, while the average age of all Spirit employees on June 17, 2005 was 48.2. *Id.* These numbers are not consistent with a plan to dramatically alter the Companies’ workplace demographics.¹⁶

3. Other Evidence

a. Subjective Process

The Employees argue that the Companies’ selection process, which they characterize as “extremely subjective,” is itself evidence of discrimination. Aplt. Br. at

¹⁶ Compare Kolesnikow v. Hudson Valley Hosp. Center, 622 F. Supp. 2d 98, 116 n.15 (S.D.N.Y. 2009) (noting that a one-year drop in average age within a small sample size was insufficient to give rise to an inference of bias against older employees), Scelza v. North Fork Bank, 33 F. Supp. 2d 193, 202 (E.D.N.Y. 1999) (stating that a drop from average age of forty-two to thirty-nine following a merger was “negligible” and “statistically insignificant”), and Mastie v. Great Lakes Steel Corp., 424 F. Supp. 1299, 1320 (E.D. Mich. 1976) (characterizing as “nominal” a drop in average age of 1.29 years), with Scott v. Goodyear Tire & Rubber Co., 160 F.3d 1121, 1129 (6th Cir. 1998) (considering a difference in average age of seven years following restructuring to be “startling” and probative of age discrimination).

50.

Because “subjective decision making provides an opportunity for unlawful discrimination,” Bauer v. Bailar, 647 F.2d 1037, 1046 (10th Cir. 1981), we “view with skepticism subjective evaluation methods,” Garett v. Hewlett-Packard Co., 305 F.3d 1210, 1218 (10th Cir. 2002). Such methods, however, are not per se unlawful. Santana v. City of Denver, 488 F.3d 860, 866 (10th Cir. 2007). Rather, “the possession by management of unbridled discretion will tend to confirm implications of discrimination drawn from statistical disparities.” Lilly v. Harris-Teeter Supermarket, 720 F.2d 326, 338 (4th Cir. 1983).

We have already concluded that no rational trier of fact could draw implications of a pattern or practice of age discrimination from the statistical disparities upon which the Employees rely. Their arguments regarding the subjectivity of the Companies’ hiring process are therefore largely beside the point. Similarly, we attach little importance to the fact that the Companies, after learning their hiring process was adversely impacting older employees, women, and racial minorities, chose to make changes only with regard to the latter two groups. Since the final results of the process do not suggest widespread discrimination, we need not consider what conclusions the Companies should or should not have drawn from their internal report in the midst of the process.

b. Tracking Employees’ Ages

The Employees also argue that managers tracked workers’ ages throughout the selection process, a practice which can suggest discrimination. For the most part, the

documents the Employees cite are innocuous. One of the cited documents from Tulsa shows only aggregated age numbers, not the ages of particular employees. The Employees did not respond to the Companies' averment that this information was kept by human resources to monitor the status of protected classes and was not discussed by the managers. See Armbruster v. Unisys Corp., 32 F.3d 768, 781 (3d Cir. 1994) (overruled on other grounds) (observing that age information maintained to ensure compliance with state and federal law is not generally evidence of intentional discrimination). The Employees also point to more suspicious handwritten notes from the Tulsa hiring process, which contain four employees' names and ages, along with reasons for not recommending them for hire. But we agree with the district court that even if these notes are evidence of discrimination, they do not indicate any widespread pattern or practice. Apsley, 722 F. Supp. 2d at 1241–42.

c. Expert Testimony

The Employees sought to tie all of their evidence of discrimination together with the report of an expert, Dr. Goldberg. The district court, however, found Dr. Goldberg's opinions unhelpful, as they went to "lay matters which a jury is capable of understanding and deciding without the expert's help." Id. at 1242 n.62. The Employees argue that "Dr. Goldberg's testimony is admissible and supports [their] claims." Aplt. Br. at 54.

Dr. Goldberg opined that the Companies "were attempting to reduce the age of [the] Wichita Division workforce through the selective rehire process." Aplt. Br. at 10. She also thought that "[t]he adverse impact suffered by older workers occurred in a

‘climate of age-based animus.’” *Id.* at 11. These are legal arguments which contribute nothing to the Employees’ case. Dr. Goldberg concluded, in addition, that the Companies’ process was “excessively subjective,” provided “fertile grounds for bias,” and was otherwise unfair and unreliable. *Aplt. Br.* at 10–11, 53–54. Assuming for the sake of argument that these conclusions were accurate, they are nonetheless of little use to the Employees. Our role is not to determine whether the Companies’ hiring process could have been better, but only whether a jury could discern from the evidence a pattern or practice of intentional age discrimination. *See EEOC v. Picture People, Inc.*, 684 F.3d 981, 989 (10th Cir. 2012) (“[A] court should not ‘act as a super personnel department that second guesses employers’ business judgments.’” (quoting *Jones v. Barnhart*, 349 F.3d 1260, 1267 (10th Cir. 2003))). For the reasons explained above, we conclude that it could not.

4. Pattern or Practice Conclusion

The district court properly granted summary judgment for the Companies on the Employees’ pattern or practice claim. To the extent that the Employees’ evidence gives rise to any inference of widespread age discrimination, the Companies have successfully rebutted the Employees’ showing “by demonstrating that [their] proof is either inaccurate or insignificant.” *Thiessen*, 267 F.3d at 1106. The evidence, considered in context, points to “the mere occurrence of isolated or accidental or sporadic discriminatory acts” rather than a “systemwide pattern or practice” of age discrimination. *Teamsters*, 431 U.S. at 336; *cf. EEOC v. Sandia Corp.*, 639 F.2d 600, 614 (10th Cir. 1980) (affirming district

court's finding that defendant engaged in a pattern or practice of age discrimination where evidence of "age bias and age based policies . . . throughout the performance rating process . . . corroborate[d] the statistical evidence and support[ed] an inference that age was a factor in selection for layoff"). Thus, the Employees fail to create a genuine issue of material fact as to the existence of a pattern or practice of discrimination.¹⁷

B. Disparate Impact Under the ADEA

Having rejected the Employees' collective-action claim for disparate treatment, we turn to the Employees' claim of disparate impact. "[T]o establish a prima facie case of disparate impact age discrimination, plaintiffs must show that a specific identifiable employment practice or policy caused a significant disparate impact on a protected group." Pippin v. Burlington Res. Oil & Gas Co., 440 F.3d 1186, 1200 (10th Cir. 2006) (quoting Ortega v. Safeway Stores, Inc., 943 F.2d 1230, 1242 (10th Cir. 1991)). Once a plaintiff has made a prima facie showing, the employer may prove that "the differentiation is based on reasonable factors other than age." Meacham v. Knolls Atomic Power Lab., 554 U.S. 84, 91 (2008) (quoting 29 U.S.C. § 623(f)(1)).

The district court assumed, without deciding, that the Employees could satisfy the

¹⁷ We emphasize that individual former employees of Boeing may still seek to prove ADEA claims of disparate treatment, but they must do so without the benefit of a presumption in their favor. See Thiessen, 267 F.3d at 1106 n.8. "It could not be more plain that the rejection of a claim of classwide discrimination does not warrant the conclusion that no member of the class could have a valid individual claim." Id. (quoting Cooper, 467 U.S. at 878); see generally, e.g., Woods v. Boeing Co., 355 F. App'x 206 (10th Cir. 2009) (unpublished) (reversing summary judgment for Boeing in former employee's ADEA suit arising from the divestiture).

first element of disparate-impact analysis—identifying a facially neutral employment practice or criteria—by pointing to the Companies’ subjective, seven-factor evaluation process. Apsley, 722 F. Supp. 2d at 1246. We do the same.

Echoing its pattern-or-practice statistical analysis, the district court concluded that the Employees could not show that they had suffered a significant disparate impact. Id. at 1247–48. As we explained above, the Employees’ statistics reveal a highly unlikely disparity in the treatment of older and younger workers. But the disparity is, in absolute numbers, very small. We hold that under the circumstances of this case, the Employees have failed to demonstrate that the divestiture “caused a significant disparate impact” on older employees. Pippin, 440 F.3d at 1200; see also Thomas v. Metroflight, Inc., 814 F.2d 1506, 1511 n.4 (10th Cir. 1987) (“Beyond a requirement of statistical significance, the Court may require in disparate impact cases that the disparity be ‘substantial’ as well.”).

C. ERISA § 510

Under ERISA § 510, “[i]t [is] unlawful for any person to discharge, fine, suspend, expel, discipline, or discriminate against a participant . . . for the purpose of interfering with the attainment of any right to which such participant may become entitled under the plan.” 29 U.S.C. § 1140. The provision “prevent[s] unscrupulous employers from discharging or harassing their employees in order to keep them from obtaining vested pension rights.” Andes v. Ford Motor Co., 70 F.3d 1332, 1338 (D.C. Cir. 1995). The typical § 510 case deals with an adverse employment action taken against an individual,

such as when “an employer fired an employee who had worked for the company for over nine years, four months before his pension would have vested, allegedly in order to avoid making contributions to his pension fund.” Id. (discussing Ingersoll-Rand Co. v. McClendon, 498 U.S. 133 (1990)).

On occasion, however, courts have also applied § 510 to larger-scale organizational decisions, such as plant closures and asset sales. See, e.g., Deeming v. Am. Standard, Inc., 905 F.2d 1124 (7th Cir. 1990); Millsap v. McDonnell Douglas Corp., 162 F. Supp. 2d 1262 (N.D. Okla. 2001). In either context, “[a] section 510 claimant must establish that the employer’s alleged desire to block the attainment of benefits rights was a determinative factor in the challenged decision.” Millsap, 162 F. Supp. 2d at 1299 (citing Gavalik v. Continental Can Co., 812 F.2d 834, 860 (3d Cir. 1987)). A company which sells or closes a business for legitimate business reasons unrelated to pension cost avoidance does not violate § 510, even if some of the employees the company lays off do not, as a result, become eligible for pension benefits. See id. Rather, “the whole issue is whether reducing pension benefits by shutting down a plant . . . was a ‘motivating factor’ or was instead ‘incidental’ because there were other, neutral, business reasons at play.” Crawford v. TRW Automotive U.S. LLC, 560 F.3d 607, 614 (6th Cir. 2009); see also Conkwright v. Westinghouse Elec. Corp., 933 F.2d 231, 239 (4th Cir. 1991) (“It is obvious that benefit costs make up a large amount of the costs of an employee to a company, and that pension rights are a substantial component of benefit costs, but these undeniable propositions are not sufficient standing alone to prove the requisite intent by

the path of pretext.”).

“To establish a prima facie case under ERISA § 510, [the Employees] must demonstrate (1) prohibited employer conduct (2) taken for the purpose of interfering (3) with the attainment of any right to which the [Employees] may become entitled.”

Gavalik, 812 F.2d at 852. If they meet this burden, the Companies must produce “admissible evidence of a legitimate, nondiscriminatory reason for [their] challenged actions.” Id. at 853. The Employees then have to demonstrate that this reason was pretextual. Id.

The Employees do not argue, at this stage, that any individual workers within the Division were targeted for non-rehire because they were close to vesting or for other reasons relating to their individual pension status.¹⁸ Rather, they contend that Boeing’s overall decision to sell off the Wichita Division and Spirit’s decision to buy it were motivated by the Companies’ desire to operate the facilities at lower cost by reducing

¹⁸ The Employees seek to prove their § 510 case using a pattern-or-practice framework, under which they would demonstrate individuals’ entitlement to relief in a second phase. Aplt. Br. at 57–58. We do not address here whether § 510 permits this approach. As the district court noted, the Employees necessarily must first demonstrate that the Companies did something that was unlawful under § 510 in order to show that violating § 510 was the Companies’ “standard operating procedure.” Mem. & Order of June 30, 2010 at 17. See also Gavalik, 812 F.2d at 852–53 (applying McDonnell Douglas burden shifting in an ERISA § 510 class action, but noting that “the class representative must establish that discrimination was the employer’s standard practice” (internal quotation marks omitted)). Whether the issue is framed in terms of McDonnell Douglas burden shifting or in terms of pattern or practice, the Employees do not present sufficient evidence that Boeing sold the Wichita Division “with the specific intent to interfere with the attainment of protected benefits.” Millsap, 162 F. Supp. 2d at 1298 (citing, inter alia, Hopkins v. Seagate, 30 F.3d 104, 106 (10th Cir. 1994)).

their pension obligations. The Companies conspired to accomplish this, the Employees argue, by not retaining Boeing's older employees.

The Employees compare the sale of the Division to the plant closing at issue in Millsap, which was held to violate § 510. In that case, McDonnell Douglas Corporation ("MDC") decided to close its Tulsa, Oklahoma, plant after determining that the employees there were on average the oldest and most senior in the company. 162 F. Supp. 2d at 1270. When it decided to shut down the Tulsa facility, MDC also knew that it could maximize pension savings by closing the plant before 1994, when a substantial portion of its workforce would turn fifty-five and therefore qualify for greater benefits. See id. at 1271 (noting that 300 out of 1,500 employees would turn fifty-five in 1994). Although MDC asserted that pension cost savings played no role in its decision-making process, the district court concluded that this claim was not credible. Id. at 1278. The district court ultimately concluded that MDC's "desire to block the attainment of benefits rights was a determinative factor" in its choice to close the Tulsa plant. Id. at 1299.

In support of their argument that the divestiture was an unlawful conspiracy to interfere with their pension rights, the Employees assert the following: Boeing was concerned about the age of its workforce; the Companies "studied the demographics and pension costs prior to deciding to sell the division," Aplt. Br. at 60; "senior management exchanged demographic information during the selective rehire process," id.; the Companies anticipated they would achieve savings by reducing the number of workers the Division employed; and the Companies were dishonest about the entire divestiture

process. This case would be much like Millsap if the Employees' evidence actually supported these claims. However, it does not.

The critical flaw in the Employees' case has to do with timing. Although the Employees insist that the Companies studied pension costs and demographics before the sale to Spirit closed, the Companies respond that "[i]t is undisputed that Boeing did not look at pension costs specific to the Wichita Division until after the decision to divest was made." Aplee. Br. at 51. The Employees have not pointed to any evidence to the contrary.¹⁹ The fact that the Companies were obliged to examine these costs after deciding to sell (in order to figure out how much Boeing owed Spirit to cover pension costs for employees Spirit retained) suggests nothing about their motivations for selling in the first place. As the Millsap court noted, "Every time an employe[r] closes part of its business, savings on employee benefits will be realized. That is not unlawful." Id. at 1299. Likewise, the fact that the Companies hoped to achieve savings by operating the Division with a smaller workforce does not demonstrate a violation of § 510. The Companies have asserted that they expected Spirit would achieve savings, inter alia, by paying its workers less and employing fewer of them. The Employees certainly cannot

¹⁹ The communications among Spirit's managers and consultants do, of course, show that Spirit expected lower pension costs under its new plan. But because these communications occurred after Boeing's decision to sell was made, they do not show that the Companies decided to carry out the sale for the purpose of interfering with pension rights.

show these proffered reasons to be pretextual.²⁰

As the Employees note, the district court denied in part the Companies' motion for judgment on the pleadings, holding that the Companies could be liable under § 510 "if plaintiffs successfully prove they participated in the alleged scheme to get rid of the older workers." Aplt. Br. at 59 (quoting Mem. & Order of Dec. 18, 2006 at 18); see also Lessard v. Applied Risk Mgmt., 307 F.3d 1020, 1028 (9th Cir. 2002) ("Parties acting in concert can't get away with what they couldn't do separately.") (Kozinski, J., concurring). The Employees, however, cannot prove that any such scheme existed. To the extent that older employees were disadvantaged in the divestiture, the Employees' own evidence points to isolated acts of discrimination—not a scheme to get rid of

²⁰ Some courts hold that plaintiffs challenging plant-wide organizational decisions must meet a heavier burden at the summary judgment stage than plaintiffs challenging individualized employment decisions. See Andes, 70 F.3d at 1337–38 ("[W]e think that as applied to sale or closure of an entire unit, the plaintiffs can satisfy § 510 only by showing that some ERISA-related characteristic special to the unit (such as its having a clearly above-average proportion of employees with pension rights about to vest) was essential to the firm's selecting the unit for closure or sale."). This is the approach the district court followed in this case. Mem. & Order of June 30, 2010 at 20–21.

In Crawford, the Sixth Circuit stated that plant-wide decisions are hard to challenge under § 510, but not because they involve any heightened standard. Rather, such cases are difficult for plaintiffs because "when plants are shut down, there will necessarily be a variety of factors at play beyond how close certain employees might be to vesting, and thus plaintiffs have a lot to wade through to establish liability." Crawford, 560 F.3d at 615. "This is not due to any presumption or legal threshold erected against their claims; the facts of these cases will always be myriad and complicated, and plaintiffs must show that the employer, in the midst of all this, in some way targeted certain employee benefits or rights for interference." Id. We need not determine which approach is correct, because the Employees cannot succeed under either formulation.

workers for pension-based reasons—as the cause.²¹

D. ADA and Title VII

The final issue in this case has to do with the Employees' claims that the Companies did not hire women and minorities in retaliation for complaining of discrimination or exercising disability rights, in violation of Title VII and the ADA. Under both Title VII and the ADA, exhaustion of administrative remedies is a prerequisite to suit. See Shikles v. Sprint/United Mgmt. Co., 426 F.3d 1304, 1317 (10th Cir. 2005); MacKenzie v. City of Denver, 414 F.3d 1266, 1274 (10th Cir. 2005). Further, administrative remedies generally must be exhausted as to each discrete instance of discrimination or retaliation. Foster v. Ruhrpumpen, Inc., 365 F.3d 1191, 1194–95 (10th Cir. 2004).

With regard to the Employees' Title VII and ADA retaliation claims, the district court observed that sixty-one of the named plaintiffs had checked a box for retaliation on their EEOC charge. Apsley, 2007 WL 3231526, at *9. Nonetheless, the narrative portion

²¹ We note, furthermore, that Spirit had no pension-related reason to discriminate against older workers in its hiring decisions. When Boeing sold the Wichita Division, its pension plans effectively terminated for all the employees there; no one, old or young, could accrue any further years of service, whether or not Spirit hired them. For the workers Spirit hired, Boeing transferred money into a fund Spirit created. From that fund, Spirit agreed to pay the pension benefits these workers had accrued under Boeing upon their retirement. As for the workers Spirit did not hire, Boeing remained responsible for paying their benefits when they reached retirement age. Because Spirit was starting a new, separate pension plan for all of the workers it hired, it simply made no difference to Spirit how many years of service an employee had attained with Boeing or whether an employee's Boeing pension had vested.

of their charges made clear that the retaliation they alleged had to do with consent forms Boeing had required them to sign relating to the layoff. Id. Nothing in the EEOC forms put the Companies on notice of retaliation claims relating to gender, race, or disability. Id. The district court did note one exception: plaintiff Warren Pyles had filed a charge alleging that he was retaliated against for filing an EEOC claim in 1997. Id. at *9 n.19. But the district court concluded that this charge had nothing to do with the current litigation and therefore did not exhaust administrative remedies for a claim that Pyles (or anyone else) was not hired by Spirit in retaliation for protected conduct. Id. Accordingly, the district court granted summary judgment for the Companies on the Employees' Title VII and ADA retaliation claims. Id. at *9.

On appeal, the Employees make two arguments. The first is that Pyles preserved class claims for himself and others who were retaliated against in the Companies' rehire process. The Employees argue that it was sufficient that Pyles wrote he was seeking to represent "all similarly situated African-Americans that have been discriminated against because of their race." Aplt. Br. at 66. In context, they say, it was clear he meant "retaliated against," not "discriminated against."

We disagree. Although we construe it liberally, Jones v. UPS, Inc., 502 F.3d 1176, 1186 (10th Cir. 2007), there is nothing in Pyles' claim that would have put the EEOC or the Companies on notice that he was alleging that his non-hire by Spirit was in retaliation for his 1997 EEOC claim. In the charge, Pyles alleged daily harassment, but he made no mention of being terminated or not hired; the Companies note that he wrote "NA" in the

section entitled “Hiring/Promotion.” Aplt. App. at 1068. Moreover, Pyles’s charge is signed and dated April 19, 2005—nearly two months before the sale closed and Boeing terminated its workforce.²² Pyles’s mention of “similarly situated African-Americans that have been discriminated against” did not refer to termination or rehire, either. We do not think this charge exhausted administrative remedies for a claim that Pyles or any other employee was retaliated against in the divestiture.²³

The Employees’ second contention is that even if Pyles did not preserve the rights of the class, the district court should make an individual determination as to each individual plaintiff. The district court, however, already did this. See Apsley, 2007 WL 3231526, at *9 (concluding that the plaintiffs who marked “retaliation” were referring to Boeing’s use of consent forms). The Employees give us no reason to think that the district court erred.

IV. CONCLUSION

The judgments of the district court are **AFFIRMED**.

²² The Employees allege without citation to the record that Pyles was terminated on May 30, 2005, which was an end date he provided for “the most recent date of the harm.” Aplt. App. at 1067.

²³ Thus, we do not reach the Companies’ other argument that Pyles’ claims are irrelevant because he was no longer being represented by the Employees’ counsel when they filed the present appeal.