

Pre-Employment Personality Tests, Algorithmic Bias, and the Americans with Disabilities Act

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ABSTRACT

Vendors of pre-employment personality tests promise that their products will help employers identify the ideal candidate for each job in a cost-effective manner, while improving diversity. Some vendors tout the algorithms underlying their assessments, claiming that artificial intelligence will remove unconscious bias from the hiring process. They report that their tests have no disparate impact based on race, sex, or national origin.

What vendors do not address, however, is the impact their personality tests have on individuals with mental disabilities, who are protected from discrimination under the Americans with Disabilities Act. In fact, they claim that they do not have and cannot obtain information on that impact, because the ADA prohibits asking job applicants whether they have a disability.

This Article contends that test vendors and employers must stop dodging the question of the effect of personality tests on individuals with mental disabilities. An adverse effect is likely: most modern personality tests are based on the Five Factor Model of Personality, and psychological studies have demonstrated correlations between the five factors and various mental disabilities. Personality test vendors should research whether and to what extent their products tend to screen out applicants with disabilities—while employers cannot ask about disability, that does not mean that test vendors cannot do so outside the employment context. In the absence of statistical evidence of group impact, applicants with disabilities should be able to assert individually focused disparate impact claims.

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Although employers can use tests with a disparate impact on persons with mental disabilities if the tests are job-related and consistent with business necessity, the evidence is mixed regarding how well personality tests predict job performance. Vendors often claim that their tests satisfy the ADA's affirmative defense because their algorithms compare the personality traits of each applicant to those of existing top performers in a particular job. However, the danger of algorithmic bias in hiring—noted by several legal scholars with respect to race, sex, and national origin—is of particular concern in the disability context. Given the underrepresentation of individuals with mental disabilities in the workplace, seeking to replicate the personality traits of a company's top performers may perpetuate exclusion and inequality.

The ADA was intended to ensure that individuals with disabilities are not barred from jobs that they can perform, and a low score on a personality test does not necessarily indicate an inability to perform a job's essential functions. In light of the individualized focus of the ADA, applicants with mental disabilities concerned about being screened out by a personality test should request as a reasonable accommodation an alternative to the test or the opportunity to opt out of the test.

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I. INTRODUCTION

Personality testing and related artificial intelligence-based tools for making hiring decisions are big business. More than 75% of large employers use hiring assessments,¹ spending \$1 billion per year.² Personality testing alone is a \$500 million industry and growing.³ The 2019 Society for Human Resources Management (“SHRM”) Annual Conference and Exposition featured more than 50 vendors in the area of pre-employment and employment testing, and the SHRM Talent and Assessment Center offers “hundreds of assessments from the industry’s top 50+ test publishers.”⁴

Personality can be defined as “the unique and enduring bundle of motivations and needs, attitudes, and behavioral tendencies that makes each of us who we are.”⁵ In a changing economy, candidates’ attitudes and behavioral traits may be more important than their technical skills and educational pedigrees.⁶ Articles in the popular press proclaim that

1. See Tomas Chamorro-Premuzic, *Ace the Assessment*, HARV. BUS. REV., July–Aug. 2015, at 118, 118–21, <https://bit.ly/3iUvepJ>; see also Lauren Weber, *To Get a Job, New Hires Are Put to the Test*, WALL ST. J., Apr. 15, 2015, at A1 (stating that “[e]ight of the top 10 U.S. private employers now administer pre-hire tests in their job applications for some positions”); Roy Maurer, *How to Choose Hiring Assessments that Work for You*, SOC’Y FOR HUM. RES. MGMT., Apr. 24, 2018, <https://bit.ly/35UIFmW> (stating that “82 percent of companies are using some form of pre-employment assessment test”).

2. See Goldie Blumenstyk, *Can a 20-Minute Test Tell Employers What a College Degree Cannot?*, CHRON. HIGHER EDUC. (Oct. 3, 2017), <https://bit.ly/3kDwDRS>.

3. See Lauren Weber & Elizabeth Dwoskin, *Are Workplace Personality Tests Fair?*, WALL ST. J. (Sept. 29, 2014, 10:30 PM), <https://on.wsj.com/3000OdX>.

4. *SHRM Talent Assessment Center: Assessments*, SOC’Y FOR HUM. RES. MGMT., <https://bit.ly/32S0z6E> (last visited Jan. 10, 2021).

5. EDWARD HOFFMAN, *PSYCHOLOGICAL TESTING AT WORK* 8 (2002); see also H. Beau Baez III, *Law’s Failure to Keep Pace with Empirical Science: An Examination of Personality and Emotional Intelligence Testing in the Workplace*, 41 OHIO N.U. L. REV. 1, 2 (2014) (“Personality refers to an individual’s unique constellation of consistent behavioral traits.”).

6. See Hilke Schellmann, *How Job Interviews Will Transform in the Next Decade*, WALL ST. J. (Jan. 7, 2020, 9:58 AM), <https://on.wsj.com/2RhhI3c>; see also Josh Bersin, *The Skills of the Future Are Now Clear: And Despite What You Think, They’re Not*

technology and artificial intelligence are transforming hiring to allow employers to better match the right candidate with the right job in a cost-effective manner.⁷

Vendors of personality tests and similar hiring tools contend that their products not only improve efficiency and reduce worker turnover,⁸ but also reduce the likelihood of discrimination.⁹ For example, Pymetrics asserts that its neuroscience-based videogames are “making the world a fairer place” by eliminating from the hiring process unconscious biases such as “sexism, racism, ageism[,] and classism.”¹⁰ Despite this promise of improved diversity, legal scholars and other commentators have noted that these hiring tools may have a disparate impact based on protected traits like race, sex, or national origin.¹¹ In response, vendors contend that their products either have no adverse effects¹² or that they test and adjust their algorithms to correct for such effects.¹³

Technical, JOSH BERSIN (Sept. 8, 2019), <https://bit.ly/2ZVwXDF> (citing an IBM study indicating that the skills most critical for today’s workforce are behavioral skills such as “[w]illingness to be flexible, agile, and adaptable to change,” “[t]ime management skills and ability to prioritize,” and “[a]bility to work effectively in team environments”).

7. See Alexia Elejalde-Ruiz, *Is It the End of the Resume?*, CHI. TRIB., July 22, 2018, at 1; Tomas Chamorro-Premuzic & Christopher Steinmetz, *The Perfect Hire: Technology and Psychology Are Reshaping the Search for the Best Employees*, SCI. AM. MIND, July/Aug. 2013, at 42, 43–47; Schellmann, *supra* note 6.

8. See *Talent Acquisition: Predict Performance*, HOGAN ASSESSMENTS, <https://bit.ly/33SmxWA> (last visited April 20, 2020) (“What if you could avoid bad hires, maximize talent potential, and seamlessly match candidate values with your company culture? Hogan makes it easy to spot top talent and avoid hires who present better than they perform.”).

9. See Kate Rockwood, *How Accurate Are Personality Assessments?*, HR MAG., Winter 2019 (Nov. 21, 2019) <https://bit.ly/3mMgSdl> (noting that “[a]dvocates of assessments claim the tools can reduce turnover by identifying candidates who are a better fit, while limiting unconscious bias on the part of hiring managers”); Chamorro-Premuzic & Steinmetz, *supra* note 7, at 46 (stating that “interviews are often systematically biased against ethnic minorities, women and elderly individuals”); Elejalde-Ruiz, *supra* note 7, at 1 (stating that advocates of AI-enhanced hiring claim that it “removes bias inherent in human decision-makers who, for example, might favor candidates who graduated from their alma mater”).

10. Josh Constine, *Pymetrics Attacks Discrimination in Hiring with AI and Recruiting Games*, TECHCRUNCH (Sept. 20, 2017, 1:05 PM), <https://tcrn.ch/32UohiU>.

11. See, e.g., Matthew T. Bodie et al., *The Law and Policy of People Analytics*, 88 U. COLO. L. REV. 961, 976–79, 1014 (2017); Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857, 857–58 (2017); Elejalde-Ruiz, *supra* note 7, Schellmann, *supra* note 6.

12. Hogan Assessments, the vendor of an influential self-report personality test, contends that there are no meaningful differences in how individuals score on its test based on their ethnicity, gender, or age. See *The Ultimate Guide to Personality Tests*, HOGAN ASSESSMENTS, <https://bit.ly/2RPLEUf> (last visited Jan. 10, 2021).

13. See Schellmann, *supra* note 6 (noting the assertion of the vendor HireVue that its technology “has less bias than traditional screening processes”); see also Elejalde-Ruiz, *supra* note 7 (stating that “[s]ome tech firms offering AI-enhanced recruiting services say they explicitly clean their data of bias”).

Personality test vendors do not address, however, the effect of their products on applicants with mental disabilities.¹⁴ The Americans with Disabilities Act (ADA) prohibits tests that have an adverse impact on individuals with disabilities and are not job-related and consistent with business necessity.¹⁵ Pre-employment personality tests may disproportionately exclude individuals with mental disabilities: most tests are based on the Five Factor Model (“FFM”) of Personality, and psychological studies demonstrate correlations between those factors and various mental disabilities.¹⁶ Moreover, news stories have expressed concern about such tests excluding individuals with disabilities,¹⁷ the most prominent story involving Kyle Behm, a young man with bipolar disorder rejected from seven minimum-wage jobs due to his results on the Unicru personality test.¹⁸ Employers should be similarly concerned that the tests they use—which have been promised to engender diversity—risk perpetuating the exclusion from the workplace of individuals with mental disabilities.

Part II describes the history of personality testing, including the development of the Five Factor Model of Personality, the once widely used Unicru test, and modern pre-employment personality tests. Part III outlines antidiscrimination law as it relates to personality tests, with

14. Although the Pymetrics website states that it “currently offers accommodations for color-blindness, learning disabilities and attention deficit hyperactivity disorder” and that it is “actively working on widening the range of accommodated disabilities,” it does not describe any attempt to measure the effect of its assessments on individuals with mental disabilities like anxiety or depression. *Mission*, PYMETRICS, <https://bit.ly/2FWnftw> (last visited Jan. 10, 2021).

15. See 42 U.S.C. § 12112(b)(6) (2018).

16. See *infra* Section II.B.

17. Since at least 2011, news stories have noted the potential conflict between pre-employment personality tests and the ADA and the lack of research on whether such tests have an adverse impact on individuals with mental disabilities. See Eve Tahmincioğlu, *Employers Turn to Tests to Weed Out Job Seekers*, NBC NEWS (Aug. 15, 2011, 9:29 AM), <https://nbcnews.to/3hUKG3J> (quoting expert Josh Bersin: “A lot of work has been done over the years on how personality tests impact gender, race, or age bias, but I don’t know if anyone has done enough research yet on mental disabilities”); see also Weber & Dwoskin, *supra* note 3 (stating that “[t]est sellers have said their own studies show personality tests don’t have an adverse impact based on race or gender” but that “little work has been done on disabilities”). The authors of a 2019 piece on artificial intelligence in hiring asserted that “[p]ersonality assessments are less likely to expose employers to possible liability for discrimination, since there is little to no correlation between personality characteristics and protected demographic variables or disabilities.” Ben Dattner et al., *The Legal and Ethical Implications of Using AI in Hiring*, HARV. BUS. REV. (Apr. 25, 2019), <https://bit.ly/2HpeDwh>. Although the article contains hyperlinks to research supporting many of its statements, it includes no hyperlink or citation supporting its assertion about personality and disability. See *id.*

18. See Ifeoma Ajunwa, *Beware of Automated Hiring*, N.Y. TIMES, Oct. 8, 2019, at A29 [hereinafter Ajunwa [*Beware of Automated Hiring*]]; Cathy O’Neil, *Personality Tests Are Failing American Workers*, BLOOMBERG OPINION (Jan. 18, 2018, 9:00 AM), <https://bloom.bg/3cpxpyN>; Weber & Dwoskin, *supra* note 3; Elejalde-Ruiz, *supra* note 7.

particular focus on ADA challenges to such testing. Part IV applies the ADA to modern pre-employment personality tests. While today's tests are unlikely to constitute prohibited pre-employment medical examinations, they do risk violating the ADA's prohibition of disparate impact discrimination by tending to screen out individuals with some mental disabilities. Moreover, the evidence is mixed regarding how successfully such tests predict job performance. This Article argues that employers and test vendors should evaluate the effect of pre-employment personality tests on applicants with mental disabilities and that opting out of such tests should be considered a reasonable accommodation under the ADA.

II. PERSONALITY TESTING AND PERSONALITY-BASED ARTIFICIAL INTELLIGENCE IN HIRING

A. *The Rise and Fall of Personality Testing and the Recognition of Disparate Impact Discrimination*

The United States has a long history of using personality tests as an employment-screening mechanism.¹⁹ The first standardized personality test was developed and administered during World War I and aimed at determining which military recruits were emotionally unsuited for combat.²⁰ Following the war, employers used other personality tests to predict applicants likely to be good salespeople or executives.²¹ By the mid-1950s, almost two-thirds of large companies used personality tests to select employees.²² One such test was the Minnesota Multiphasic Personality Inventory (MMPI), initially developed in the clinical context to sort patients at the University of Minnesota mental hospital into categories.²³ A psychologist and neuropsychiatrist formulated the test by asking the same true-or-false questions to patients with clear mental

19. See HOFFMAN, *supra* note 5, at 19 (discussing the development in 1916 of personality tests for selecting salespeople and police officers).

20. See *id.* at 20–21. The test was the “Personal Data Sheet” developed by Professor Robert Woodworth and also known as the Woodworth Test of Emotional Stability. See also ANNIE MURPHY PAUL, *THE CULT OF PERSONALITY* 48 (2004).

21. See HOFFMAN, *supra* note 5, at 22; see also Nicole B. Barenbaum & David G. Winter, *History of Modern Personality Theory and Research*, in *HANDBOOK OF PERSONALITY: THEORY AND RESEARCH* 3, 6 (Oliver P. John et al. eds., 3d ed. 2008) (“Psychologists’ success with mental tests during World War I promoted their interest in developing efficient ‘scientific’ tests for selection, diagnosis, and placement to meet practical needs of industries, educational institutions, and social agencies.”) (citation omitted).

22. See HOFFMAN, *supra* note 5, at 23.

23. See Elizabeth D. De Armond, *To Cloak the Within: Protecting Employees from Personality Testing*, 61 DEPAUL L. REV. 1129, 1139 (2012); PAUL, *supra* note 20, at 57. Within 15 years of its development, the MMPI became the most widely used objective personality test in the world. *Id.* at 56–59.

disorders and to a control group of hospital visitors.²⁴ The answers given by the majority of the control group were deemed the “normal” answers; those given by a majority of those with a particular mental illness were deemed indicators of that illness.²⁵ Notably, the control group was representative of the local population—all were white, almost all were Protestant, and many were of Scandinavian descent.²⁶ This group of so-called “Minnesota Normals” formed psychology’s standard for normality for the next 50 years.²⁷ Despite its initial purpose of diagnosing mental impairments, numerous employers have used the MMPI, its updated version the MMPI-2, or one of hundreds of tests borrowing its format, language, and structure to screen candidates for a variety of jobs.²⁸

Employers’ use of personality testing declined in the late-1960s and 1970s, however, due in part to courts’ recognition that hiring decisions based on seemingly neutral criteria like test results could constitute disparate impact discrimination, actionable under Title VII.²⁹ In *Griggs v. Duke Power Co.*, the Supreme Court held that an employer violated Title VII of the Civil Rights Act of 1964 by requiring that employees pass two standardized intelligence tests and have a high school diploma

24. See De Armond, *supra* note 23, at 1139; PAUL, *supra* note 20, at 48–52. The psychologist, using his own diagnostic judgment, “selected groups of patients with ‘pure’ uncomplicated cases of particular disorders: first hypochondriacs, later depressives, psychasthenics, hysterics, psychopathic deviates, hypomanics, paranoiacs, and schizophrenics.” *Id.* at 51.

25. See De Armond, *supra* note 23, at 1139–40. The psychologist described the process as permitting the mental patients “to design their own test.” PAUL, *supra* note 20, at 50.

26. See PAUL, *supra* note 20, at 51.

27. See *id.* at 51–52.

28. See Maureen E. Mulvihill, Note, *Karraker v. Rent-A-Center: Testing the Limits of the ADA, Personality Tests, and Employer Preemployment Screening*, 37 LOY. U. CHI. L.J. 865, 879 (2006); PAUL, *supra* note 20, at 62–63, 65. As explained by Annie Murphy Paul, “[a] test that had been designed to spot pathological extremes of behavior was now expected to sort out the much subtler differences among normal people” and “was given at least as often to normal people as to psychiatric patients [and was] used to screen job applicants.” *Id.* at 57. Released in 1989, the MMPI-2 was based on new “[n]ormals”—a control group larger and more demographically diverse than the original Minnesota Normals—and eliminated some of the most criticized questions. *Id.* at 69.

29. See HOFFMAN, *supra* note 5, at 23–24; see also 42 U.S.C. § 2000e-2(a) (2018) (prohibiting employment discrimination based on race, color, religion, sex, or national origin); *id.* § 2000e-2(k)(1)(A) (stating that “[a]n unlawful employment practice based on disparate impact is established” if the “complaining party demonstrates that a respondent uses a particular employment practice that causes a disparate impact on the basis of race, color, religion, sex, or national origin” and “the respondent fails to demonstrate that the challenged practice is job related for the position in question and consistent with business necessity”). See also SCOTT HIGHHOUSE ET AL., *ESSENTIALS OF PERSONNEL ASSESSMENT* 70–71 (2d ed. 2016). Other reasons for the decline in employment-related personality testing included public criticism that such tests invaded workers’ privacy and academic criticism contending that personality tests did a poor job of predicting people’s behavior. See *id.*; PAUL, *supra* note 20, at 184–85.

in order to obtain a job in one of the company's more desirable departments, where such requirements had the effect of disproportionately excluding black employees and could not be shown to be related to successful job performance.³⁰ Although the challenged requirements may have been "neutral on their face and even neutral in terms of intent," they violated Title VII because "Congress directed the thrust of the Act to the *consequences* of employment practices, not simply the motivation."³¹ Following *Griggs*, the Equal Employment Opportunity Commission (EEOC) issued guidelines on tests and other selection procedures,³² which courts rely on in determining whether such procedures violate Title VII.³³ As discussed in Section III.A, the guidelines provide a standard for determining whether a test has an adverse impact and require employers to validate as "job-related" tests that have such an impact.

Rather than attempting to validate their personality tests, many employers stopped using such tests due to fear of litigation.³⁴ Other reasons for the tests' diminished use included public criticism that such tests invaded workers' privacy and academic criticism contending that personality tests did a poor job of predicting people's behavior.³⁵

B. *The Rebirth of Personality Testing with the Five Factor Model*

After this period of decline, however, personality research experienced a paradigm shift, as psychologists reached near-consensus on a descriptive model of personality, the "Five Factor" or "Big Five"

30. See *Griggs v. Duke Power Co.*, 401 U.S. 424, 431–32 (1971). The Court noted that the EEOC had found in another case that the use of a group of tests—including the two tests at issue in *Griggs*—resulted in only 6% of blacks passing the tests, compared with 58% of whites. See *id.* at 430 n.6. Moreover, according to census statistics, black males were much less likely than white males to have a high school diploma. See *id.*

31. *Id.* at 430, 432 (emphasis added).

32. See Uniform Guidelines on Employee Selection Procedures, 29 C.F.R. § 1607.1 (2020) ("These guidelines incorporate a single set of principles which are designed to assist employers, labor organizations, employment agencies, and licensing and certification boards to comply with the requirements of Federal law prohibiting employment practices which discriminate on grounds of race, color, religion, sex, and national origin. They are designed to provide a framework for determining the proper use of tests and other selection procedures.")

33. See *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 431 (1975).

34. See HOFFMAN, *supra* note 5, at 24; see also HIGHHOUSE ET AL., *supra* note 29, at 70–71.

35. HIGHHOUSE ET AL., *supra* note 29, at 71; PAUL, *supra* note 20, at 184–85. Walter Mischel's 1968 book *Personality and Assessment* "had the effect of a bombshell," asserting that "the usefulness of broad dispositional personality variables had been seriously overstated, because they did not show cross-situational or temporal consistency and were not highly correlated with behavioral outcomes." Barenbaum & Winter, *supra* note 21, at 16.

Model.³⁶ By applying factor analysis to the natural-language terms that people use to describe themselves and others, psychologists at various laboratories across the United States discovered that the descriptors cohered around five factors.³⁷ The Five Factor approach posits that almost all normal personality is based on five broad dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.³⁸ The Five Factor Model reinvigorated the field of personality assessment and inspired thousands of research studies.³⁹

Currently, the vast majority of hiring begins with an online application process, allowing candidates to apply to a large number of potential employers.⁴⁰ This volume of applications, along with improved technology automating the application process, has led to a proliferation of personality tests as pre-employment screening.⁴¹ Most of the tests are based on the Five Factor Model.⁴² As of 2015, eight of the top ten private

36. See HOFFMAN, *supra* note 5, at 24; see also Oliver P. John et al., *Paradigm Shift to the Integrative Big Five Trait Taxonomy*, in HANDBOOK OF PERSONALITY: THEORY AND RESEARCH 114, 119 (Oliver P. John et al. eds., 3d ed. 2008).

37. See PAUL, *supra* note 20, at 183–84; see also HOFFMAN, *supra* note 5, at 24–25; John et al., *supra* note 36, at 118–21. As explained by Oliver P. John, Laura P. Naumann, and Christopher J. Soto, “[t]he *lexical hypothesis* posits that most of the socially relevant and salient personality characteristics have become encoded in the natural language” such that “the personality vocabulary contained in the dictionaries of a natural language provides an extensive, yet finite, set of attributes that the people speaking that language have found important and useful in their daily interactions.” *Id.* at 117 (citation omitted).

38. See HOFFMAN, *supra* note 5, at 24; see also PAUL, *supra* note 20, at 183–84 (“These researchers gave the factors different names, but the essence of each was the same across experiments. There was Extroversion, the inclination to actively reach out to others. Neuroticism, the disposition to feel negative emotions. Agreeableness, the tendency to be good-natured and cooperative. Conscientiousness, the propensity to be organized and goal oriented. And Openness, the proclivity to be imaginative and curious.”).

39. See John et al., *supra* note 36, at 114–17; PAUL, *supra* note 20, at 184, 187.

40. See Ifeoma Ajunwa & Daniel Greene, *Platforms at Work: Automated Hiring Platforms and Other New Intermediaries in the Organization of Work*, in WORK AND LABOR IN THE DIGITAL AGE 61, 72 (Steven P. Valls & Anne Kovalainen eds., 2019).

41. See Lauren Weber, *Today’s Personality Tests Raise the Bar for Job Seekers*, WALL ST. J., at A1 (Apr. 14, 2015, 11:13 PM) <https://on.wsj.com/2FtoSi3>; Tahmincioğlu, *supra* note 17.

42. See Lauren Weber, *Better to Be Artistic or Responsible? Decoding Workplace Personality Tests*, WALL ST. J. (Sept. 29, 2014, 11:43 PM) <https://on.wsj.com/2G0DE08>; Dori Meinhert, *What Do Personality Tests Really Reveal?*, SOC’Y FOR HUM. RESOURCES MGMT. (June 1, 2015), <https://bit.ly/3iYjx15>; see also Steven L. Thomas & Wesley A. Scroggins, *Psychological Testing in Personnel Selection: Contemporary Issues in Cognitive Ability and Personality Testing*, J. BUS. INQUIRY, 2006, at 28, 34 (“As the Big-Five Model has become more accepted, interest in the use of personality measures in selection has increased.”).

employers in the United States used pre-employment testing in the job application process for some positions.⁴³

C. *The Unicru/Kronos Personality Assessment*

The most notorious pre-employment personality test throughout the early-2000s was the Unicru test. The software company Unicru⁴⁴ developed the test based on the Five Factor Model,⁴⁵ and the human-resources-technology firm Kronos purchased the company and the test in 2006.⁴⁶ In 2008, Kronos processed more than 10 million Unicru personality assessments, and as of 2009, the Unicru test was the most common automated assessment of individuals seeking hourly jobs in the retail sector.⁴⁷ Among the companies that have used Unicru's personality assessment tool are Bennigan's, Best Buy, Blockbuster, CVS, Finish Line, and Target.⁴⁸

The Unicru test consisted of around 100 statements—such as “You have to give up on some things that you start” and “Any trouble you have is your own fault”—with which applicants must strongly agree, agree, disagree, or strongly disagree.⁴⁹ The Unicru software sorted applicants into green, yellow, or red categories based on their test scores, with green as the top rating.⁵⁰ Although David Scarborough, the industrial psychologist who helped develop the Unicru test, stated that the test results should be just one piece of the hiring process and that management judgement and interviews remained important, “red”

43. See Weber, *supra* note 41. A 2014 study conducted by the Society for Human Resources Management revealed that about 22% of companies used personality testing to evaluate job candidates. See Meinhert, *supra* note 42.

44. Unicru was the market leader for automated hiring platforms (AHP) and the first and largest AHP vendor for the hourly workforce. See Ajunwa & Greene, *supra* note 40, at 72–73. This allowed Unicru to accumulate vast amounts of data about potential employees. See *id.* at 77. Unicru then recruited psychologists to develop assessments for applicants based on the performance of current employees. See *id.*

45. See David Autor & David Scarborough, *Does Job Testing Harm Minority Workers? Evidence from Retail Establishments*, 123 Q.J. ECON., no. 1, Feb. 2008, at 219, 226–27 (stating that the Unicru test “measures five personality attributes that collectively constitute the ‘five factor’ model”).

46. See Staff Report, *Kronos Expands Offerings Following Unicru Acquisition* (Aug. 8, 2006), <https://bit.ly/35Zg8LR>; see also Press Release, Paul Lacy, Kronos Announces Agreement to Acquire Unicru (July 13, 2006, 8:15 AM), <https://bwnnews.pr/3004Rao>.

47. See Vanessa O’Connell, *Test for Dwindling Retail Jobs Spawns a Culture of Cheating*, WALL ST. J. (Jan. 7, 2009, 12:01 AM), <https://on.wsj.com/360d3eo>.

48. See *id.*; see also Alison Overholt, *True or False: You’re Hiring the Right People*, FAST COMPANY (Jan. 31, 2002), <https://bit.ly/300RB5a>.

49. See Autor & Scarborough, *supra* note 45, at 227; O’Connell, *supra* note 47.

50. See Autor & Scarborough, *supra* note 45, at 227.

applicants were usually automatically excluded from consideration.⁵¹ The Unicru system, by eliminating a large number of applicants early in the application process, substantially reduced the time and cost associated with hiring new employees.⁵²

David Scarborough of Unicru/Kronos asserted in an interview that the Unicru test “allows you to clone your best, most reliable people.”⁵³ Employers could use the test to determine the personality traits of their top employees and then use that information to only hire applicants with the same traits.⁵⁴ Yet even though employers could tailor the Unicru test to the needs of their particular workplace, enough companies used the test in the same or similar way to “spawn a culture of cheating.”⁵⁵ Individuals posted sample answer keys to the test on the Internet (interestingly, according to these keys, the correct answer is always either “strongly agree” or “strongly disagree”),⁵⁶ and asserted that when they followed the keys rather than answering honestly, they were hired.⁵⁷

Along with the sample answer keys, evidence of Unicru-related hostility is widespread on the Internet. Criticisms from test takers included that the test is sinister, rewards lying, “is just a way for companies to hire robots,”⁵⁸ is nonsense that does not predict workforce behavior in any way, and “is designed so that anyone with a soul fails or is forced to lie out their ass.”⁵⁹ Individuals also asserted that they cheated on the test in order to get hired but then performed well on the job.⁶⁰ Kronos contended, however, that the Unicru test provided value to

51. See O’Connell, *supra* note 47. Some employers also excluded from consideration applicants scoring yellow. See *id.*; see also Overholt, *supra* note 48.

52. See Overholt, *supra* note 48.

53. *Id.*

54. See *id.*

55. O’Connell, *supra* note 47.

56. Melanie Shebel, *Unicru Personality Test Answer Key: Read This, Get Hired, TOUGH NICKEL* (July 24, 2020), <https://bit.ly/2RSjica>; Timothy Horrigan, *Some Answers to the Unicru Personality Test*, TIMOTHYHARRIGAN.COM (Jan. 27, 2009), <https://bit.ly/3kExrpr>; TheMegaManNetwork09, *Unicru Sucks!*, YOUTUBE (Feb. 16, 2012), <https://bit.ly/3cLLXQd>.

57. See O’Connell, *supra* note 47. Kronos contended that the posted answer keys often contained answers that were out of date and otherwise incorrect and that the company’s scoring methodology thwarted attempts at cheating. See *id.*

58. *Id.*

59. u/scientologist2, *The Unicru Test Is a Common Commercial Personality Test Used by Employers to Screen Applicants. Here Are Some Suggested Answers.*, REDDIT (2009), <https://bit.ly/32RnVcB>; Shebel, *supra* note 56; see also iworkatborders, *What Is Your Opinion of the Unicru Test?*, IWORKATBORDERS BLOG (Nov. 10, 2008, 7:07 PM), <https://bit.ly/32QwULc> (containing a comment thread further discussing this topic).

60. See O’Connell, *supra* note 47; see also Timothy Horrigan, *Before You Can Get a Job, You Must Pass the Unicru Test? Strongly Agree!*, DAILY KOS (Jan. 30, 2009), <https://bit.ly/3hSd3iP> (containing a comment thread where users confess to cheating on the test).

employers by significantly reducing their hourly employee turnover rate.⁶¹ As discussed in Section III.A., the EEOC challenged several employers' use of the Unicru test. The Kronos website currently contains no reference either to Unicru or to personality tests.⁶²

D. Personality Testing and Personality-Based Artificial Intelligence in Hiring Today

In researching this article, the author applied online to several companies for entry-level jobs, seeking to determine whether the companies required completion of a personality test before submitting an application and, if so, what the tests looked like. In March and April 2019, the author was able to apply to Finish Line, Kroger, and Lowe's without completing a personality test. Applications to McDonald's, Pizza Hut, PetSmart, and Boston Market *did* require personality-test completion.

McDonald's and Pizza Hut used the same personality assessment⁶³—45 questions for applicants to consider, with five options ranging from “not at all true” to “very true.” In contrast to the Unicru questions which asked about personal qualities in general (for example, “You could describe yourself as ‘tidy’” and “You have confidence in yourself”), the McDonald's and Pizza Hut questions focused on one's personal qualities in the workplace (for example, “There are times on the job when it's been a little hard to get organized” and “On the job, there are times when I lack self-confidence”). In fact, the assessments begin with an instruction to “select the answer that most accurately describes how ‘true’ it is for you at work.”

The PetSmart personality assessment consisted of 50 questions to be answered with completely disagree, strongly disagree, disagree, neutral, agree, strongly agree, completely agree. The instructions advised applicants to “focus on how you typically are at work, rather than how you would like to be at work” in selecting a response. Many of the questions also included an express reference to work (for example, “I do not obsess over the minor parts of my work” and “I want to know what to expect on a daily basis at work”), and some expressly referred to coworkers (for example, “My coworkers can see when I am upset” and “Coworkers often discuss their problems with me”). Other questions, despite the instruction about “how you typically are at work,” arguably

61. See O'Connell, *supra* note 47; see also Autor & Scarborough, *supra* note 45, at 222.

62. See KRONOS, <https://www.kronos.com/> (last visited Feb. 23, 2020).

63. McDonald's applications also used a cognitive assessment and an attitude assessment.

could lead an applicant to respond based on their personality outside the workplace context. For example, questions included “I think about my past decisions a lot,” “People are easy to understand,” “I sometimes expect the worst,” and “People say that I am eccentric.”

The Boston Market assessment differed from the others in two ways. Its 56 questions, to be answered agree or disagree, included five questions testing basic cognitive ability rather than personality (for example, “There are eighty days in a month” and “There are seven days in a week”). More significantly, the questions did not focus solely or even primarily on one’s personality at work. Rather, applicants were asked whether they agreed or disagreed with such statements as “You resent having friends or members of your family tell you what to do”; “Your friends say you are too nice”; “You are sometimes feel bored or tired for no reason”; and “You have days in which it seems that everything goes wrong.”

McDonalds, Pizza Hut, PetSmart, and Boston Market had many options for obtaining pre-employment personality tests, as numerous vendors market such assessments to employers. One such vendor is Fit First Technologies, which offers TalentSorter, recruitment software containing a patented behavioral assessment—based on the Five Factor Model—used to determine a candidate’s fitness for a job.⁶⁴ Businesses have used TalentSorter to assess more than two million candidates.⁶⁵ Jobtimize, a related Fit First Technologies product, allows job seekers to complete a personality profile to learn which jobs would best suit them.⁶⁶ The author completed a Jobtimize Fit Assessment, which consisted of 260 questions—such as “I worry about what people think of me”; “I understand others’ feelings”; and “I hardly ever feel sad or unhappy”—almost all of which related to personality in general rather than being

64. See FIT FIRST TECHNOLOGIES, <https://fitfirsttech.com/> (last visited Feb. 21, 2020); *How It Works*, TALENTSORTER, <https://bit.ly/2G42rA9> (last visited Feb. 21, 2020); *The Science Behind Successful Hiring*, TALENTSORTER, <https://bit.ly/360W23F> (last visited Feb. 21, 2020). According to the TalentSorter website, the software is backed by extensive human analytics and job-performance data showing that a candidate’s potential for success in a role has a very high correlation with his or her behavioral traits, attitude and standards. See *supra* *How it Works*. A sample Job Fit Report on the website indicates that the software assesses the following “Core Behavioral Traits”: extraversion, agreeableness, conscientiousness, stability, openness, intensity, control, compliance, decisiveness, optimism, acumen, cooperativeness, autonomy, tact, work ethic, integrity, and ambition. Amy Lewis, *Job Fit Report & Interview Guide*, TALENTSORTER, at 2–3 (Jan. 9, 2020) <https://bit.ly/2ZrBKwn>.

65. See *How it Works*, *supra* note 64.

66. See *generally Our Products*, FIT FIRST TECHNOLOGIES, <https://bit.ly/3ckAMAs> (last visited Feb. 21, 2020) (stating that employers can “view Jobtimize’s list of pre-matched candidates, utilizing a ‘two-factor authentication’ style approach by giving priority to the candidates who have *both* qualifications + behavioral/soft skill compatibility; thus, ensuring more successful hiring . . . outcomes”).

limited to the workplace context. Based solely on her Fit Assessment (without considering work experience, skills, or interests), Jobtimize listed the author's top job matches as massage therapist, personal support worker, and archivist.⁶⁷

Another top vendor is Hogan Assessments, which describes itself as “lead[ing] the world in personality assessment and leadership development” and “serving more than half of the *Fortune 500*.”⁶⁸ The Hogan Personality Inventory is the one of the most influential personality tests based on the Five Factor Model.⁶⁹ It comprises *seven primary scales*: adjustment, ambition, sociability, likeability (or interpersonal sensitivity), prudence, intellectance (or inquisitiveness), and learning approach (or school success);⁷⁰ as well as *six occupational scales*: service orientation (attentiveness and courteousness toward customers), stress tolerance (composure, calmness under pressure), reliability (honesty, positive organizational citizenship), clerical potential (self-discipline, meticulousness, and the ability to communicate clearly), sales potential (energy, social skills, and the ability to solve problems for customers), and managerial potential (leadership ability, planning, and decision-making skills).⁷¹ More than three million participants have been assessed via the HPI.⁷²

FurstPerson, another vendor, touts that its “customized solutions enable your company to find the ideal talent for your jobs” and that its “library of assessment tools includes aptitude tests, job simulators, and personality tests to create a holistic talent assessment experience.”⁷³ FurstPerson calls its personality test “1stScreen” and states that the test is based on the Five Factor Model of personality and “measures a candidate’s characteristics that affect curiosity, dependability, friendliness, energy, social interaction, achievement, performance, retention, and motivation fit with a job and environment.”⁷⁴ The website includes the following sample statement, with which applicants must either agree or disagree: “I am typically very calm, but on certain days I can get upset easily.”⁷⁵

67. The Fit Assessment also indicated that the author’s core traits were tactful, accommodating, and methodical. *See id.*

68. *About*, HOGAN ASSESSMENTS, <https://bit.ly/3611ljM> (last visited Feb. 21, 2020).

69. *See* HOFFMAN, *supra* note 5, at 103.

70. *See id.* at 104; *see also* *Hogan Personality Inventory*, HOGAN ASSESSMENTS, <https://bit.ly/3mSe8ez> (last visited Feb. 21, 2020); John et al., *supra* note 36, at 115.

71. *See* *Hogan Personality Inventory*, *supra* note 70.

72. *Id.*

73. *Products*, FURSTPERSON, <https://bit.ly/2RPUrFN> (last visited Feb. 19, 2020).

74. *Candidate Assessment Test for Behavioral Tendencies, Personality and Interpersonal Style*, FURSTPERSON, <https://bit.ly/3mNcTNk> (last visited Nov. 5, 2020).

75. *Candidate Assessment Test for Behavioral Tendencies, Personality and Interpersonal Style*, FURSTPERSON, <https://bit.ly/2KB4n5S> (last visited Jan. 14, 2021).

Yet another vendor, Aspiring Minds, asserts that it “[b]lend[s] the power of AI and the science of psychometrics to optimize your recruiting process so that you can confidently select and hire the right candidate for every job, every time.”⁷⁶ Aspiring Minds claims that its personality test, which is also based on the Five Factor Model, has “proven success” in more than 100 job roles, testing more than five million candidates.⁷⁷

Other vendors assess applicant personality using techniques that are different from the self-report questionnaires discussed above and are more rooted in artificial intelligence, algorithms, and data mining.⁷⁸ One such vendor, Pymetrics, offers neuroscience-based videogames that assess more than 50 personality and cognitive traits, such as flexibility, proclivity for risk, and decisiveness.⁷⁹ After a company identifies its top performers in particular jobs, those star employees play the games, and using “state of the art data science techniques,” Pymetrics determines which traits correlate with success in specific company roles.⁸⁰ Job applicants then play the games, and Pymetrics calculates a “job fit score band for each individual . . . by running the individual’s game data

76. ASPIRING MINDS, <https://www.aspiringminds.com/> (last visited Feb. 19, 2020).

77. See *Products: Personality Test*, ASPIRING MINDS, <https://bit.ly/3kzpv90> (last visited Feb. 19, 2020). A sample question on the website, with which applicants must strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree is, “[o]ne should do only one task at a time to do it efficiently.” See *id.* Another vendor is Wonderlic, which uses a cognitive ability test, a motivation test, and a personality test (based on the Five Factor Model) to determine each candidate’s WonScore. *Personality Assessment*, WONDERLIC, <https://bit.ly/361jluu> (last visited Feb. 19, 2020).

78. Artificial intelligence involves computers mimicking human intelligence and making decisions in ways that humans consider smart. See Stephanie Bornstein, *Antidiscriminatory Algorithms*, 70 ALA. L. REV. 519, 522 n.11 (2018) (quoting Bernard Marr, *What Is the Difference Between Artificial Intelligence and Machine Learning?*, FORBES (Dec. 6, 2016, 2:24 AM), <https://bit.ly/3hYeEUm>); McKenzie Raub, Comment, *Bots, Bias and Big Data: Artificial Intelligence, Algorithmic Bias and Disparate Impact Liability in Hiring Practices*, 71 ARK. L. REV. 529, 531 (2018). Implicit in the concept of artificial intelligence are algorithms, which tell computers how to solve problems, leading to automated decisions. See *id.* at 532; see also Solon Barocas & Andrew Selbst, *Big Data’s Disparate Impact*, 104 CALIF. L. REV. 671, 674 n.10 (2016) (defining an algorithm as “a formally specified sequence of logical operations that provides step-by-step instructions for computers to act on data and thus automate decisions” and explaining that algorithms “both automat[e] the discovery of useful patterns in datasets and automat[e] decision making that relies on these discoveries”). Finally, data mining “automates the process of discovering useful patterns” in datasets, “revealing regularities upon which subsequent decision making can rely.” *Id.* at 677. This “accumulated set of discovered relationships” is called a model. *Id.*

79. See PYMETRICS OVERVIEW WHITEPAPER, on file with author.

80. Josh Constine, *Pymetrics Attacks Discrimination in Hiring with AI and Recruiting Games*, TECHCRUNCH (Sept. 20, 2017, 1:05 PM), <https://tcrn.ch/3iXxZ9z>; see also PYMETRICS OVERVIEW WHITEPAPER, *supra* note 79. Other traits assessed via the Pymetrics games include emotion-detection, fairness, focus, memory, and risk-taking. See Constine, *supra*.

through the job model custom-built for the client company.”⁸¹ Another vendor, HireVue, uses artificial intelligence—an algorithm that picks up on more than 20,000 data points—to analyze the facial expressions, body language, tone, and word choice of applicants in video job interviews.⁸² According to HireVue, these data points provide insight into personality traits, as well as interpersonal and communication skills.⁸³ HireVue then compares each applicant to the “ideal candidate,” a composite of traits based on analyses of existing top performers in a particular job.⁸⁴

III. ANTIDISCRIMINATION LAW AND PERSONALITY TESTS

A. *Personality Tests and Title VII*

Title VII of the Civil Rights Act of 1964 prohibits employment discrimination based on race, color, religion, sex, or national origin.⁸⁵ As discussed above, the Supreme Court held in the 1971 *Griggs* decision that Title VII not only prohibited intentional discrimination, but also prohibited facially neutral employment practices that had the effect of discrimination based on a protected trait and were unrelated to successful job performance.⁸⁶ Under this disparate impact theory of discrimination, an employer violates Title VII by using an employment practice that causes an adverse impact on the basis of race, color, religion, sex, or national origin, unless the employer can prove that the practice is job-related and consistent with business necessity.⁸⁷ In short, claims of disparate impact discrimination “involve employment practices that are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity.”⁸⁸ Moreover, even if an employer can prove business

81. PYMETRICS OVERVIEW WHITEPAPER, *supra* note 79. Similar to Pymetrics, KnackApp for Business offers games designed to reveal skills and personality traits, which an employer can use to assess applicants. *See How it Works*, KNACKAPP, <https://bit.ly/3hWlqdt> (last visited Feb. 20, 2020); Bodie et al., *supra* note 11, at 976–79. ActiView also offers virtual-reality games measuring personality attributes, cognitive abilities, and work methods. *See Schellmann, supra* note 6.

82. *See* Elejalde-Ruiz, *supra* note 7; *see also* Richard Feloni, *I Tried the Software that Uses AI to Scan Job Applicants for Companies like Goldman Sachs and Unilever Before Meeting Them – and It’s Not As Creepy As It Sounds*, BUS. INSIDER, (Aug. 23, 2017, 12:00 PM), <https://bit.ly/32UgEbZ>.

83. *See* Nathan Mondragon, *The Next Generation of Assessments*, HIREVUE WHITE PAPER 6 (Feb. 2019), <https://bit.ly/3o4Zn8p>.

84. *See* Feloni, *supra* note 82.

85. *See* 42 U.S.C. § 2000e-2(a) (2018).

86. *See* *Griggs v. Duke Power Co.*, 401 U.S. 424, 431–32 (1971).

87. *See* 42 U.S.C. § 2000e-2(k). Congress expressly codified the disparate impact theory of discrimination via the Civil Rights Act of 1991, which amended Title VII. *See id.*

88. *Int’l Bhd. of Teamsters v. United States*, 431 U.S. 324, 335 n.15 (1977).

necessity, an employee can still establish a violation of Title VII by demonstrating that the employer refused to adopt an alternative employment practice with less disparate impact that would serve the employer's needs.⁸⁹

The EEOC has issued guidelines on employment tests and other selection procedures,⁹⁰ which courts generally rely on in determining whether such procedures violate Title VII.⁹¹ Under the guidelines, the EEOC and other federal enforcement agencies will generally regard a selection rate for any race, sex, or ethnic group that is less than four-fifths or 80% of the rate for the group with the highest rate as evidence that the selection procedure has an adverse impact.⁹² If a test has an adverse impact on the employment opportunities of a protected class, the test is discriminatory in violation of Title VII unless it has been validated via a criterion-related, content, or construct-validity study.⁹³ Courts are unlikely to accept a validity study that uses vague standards for employee productivity or is based on subjects who differ considerably from those taking the test at issue.⁹⁴ Courts are more likely to find a test

89. See 42 U.S.C. § 2000e-2(k)(1)(C).

90. See 29 C.F.R. § 1607.1 (2020) (“These guidelines incorporate a single set of principles which are designed to assist employers, labor organizations, employment agencies, and licensing and certification boards to comply with the requirements of Federal law prohibiting employment practices which discriminate on grounds of race, color, religion, sex, and national origin. They are designed to provide a framework for determining the proper use of tests and other selection procedures.”).

91. See *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 430–31 (1975).

92. See 29 C.F.R. § 1607.4(D) (2020). Employers must maintain records disclosing the impact its tests have on employment opportunities of individuals by race, sex, or ethnic group. See § 1607.4(A).

93. See 29 C.F.R. § 1607.3(A) (2020). A criterion-related validity study demonstrates that the test predicts or significantly correlates with important criteria of job performance; a content-validity study demonstrates that the content of the test approximates the job; and a construct-validity study demonstrates the behavior required for effective job performance and the constructs believed to underlie effective behavior. See *id.* §§ 1607.5(B), 1607.14. See also HIGHHOUSE ET AL., *supra* note 29, at 89–90.

94. See *Albemarle*, 422 U.S. at 433. In *Albemarle*, the Supreme Court relied on the EEOC guidelines to reject an employer's attempt to prove that two intelligence tests were job-related for skilled positions in the paper mill. See *id.* at 431. The plant had several functional departments, each with distinct lines of progression. See *id.* at 427. Shortly before the case went to trial, the employer hired an industrial psychologist to demonstrate that the testing program was job-related. See *id.* at 429–30. The psychologist compared the test scores of current employees (almost all of whom were white) near the top of departmental lines of progression with supervisors' ranking of each employee's job performance relative to their coworkers and asserted that there was a significant correlation. See *id.* at 430. The Court disagreed, finding that the employer's validation study was “materially defective” when “[m]easured against the [g]uidelines.” *Id.* at 431. The Court noted that the study results did not show significant correlations for each test in each skilled line of progression; that the “standard” used for the supervisor rankings was “extremely vague and fatally open to divergent interpretations”; that the study's focus on job groupings near the top of the lines of progression did not indicate that the test was a permissible measure of the qualifications needed for lower level jobs; and that

to be job-related where the employer followed a careful process in constructing the test, including a thorough analysis of the job in question.⁹⁵

If, on the other hand, a personality test is more arbitrary than predictive and tends to disproportionately exclude applicants of a particular race, sex, or national origin, it is vulnerable to legal challenge under Title VII's disparate impact theory. The EEOC brought such challenges against the use of the Unicru test by Target, Best Buy, and CVS, reaching conciliation agreements with all three companies. In 2015, Target agreed to pay \$2.8 million to settle EEOC charges that three assessment tests used during its hiring process violated Title VII due to a disparate impact based on race and sex.⁹⁶ The EEOC's statistical analysis showed that the tests disproportionately screened out African-Americans, Asian-Americans, and women, and the agency concluded that the tests were not sufficiently job-related.⁹⁷ In 2018, both Best Buy and CVS reached settlement agreements with the EEOC after the agency found that each company's use of pre-employment personality tests had a disparate impact on applicants based on race and national origin.⁹⁸ Target noted that it had already discontinued use of the challenged tests,⁹⁹ and Best Buy and CVS stopped using the tests after receiving the initial charge of discrimination.¹⁰⁰

the study dealt only with experienced white workers but the tests were given to inexperienced workers, many of whom were nonwhite. *Id.* at 431–35.

95. See *Ricci v. DeStefano*, 557 U.S. 558, 587–88 (2009) (finding that city's promotional examinations for firefighters were job-related and consistent with business necessity where IOS, the test-production company, devised the tests "after painstaking analyses of the captain and lieutenant positions—analyses in which IOS made sure that minorities were overrepresented"); *Vulcan Soc'y of N.Y.C. Fire Dep't. v. Civil Serv. Comm'n of N.Y.C.*, 490 F.2d 387, 396 (2d Cir. 1973) (adopting a "sliding scale for evaluating the examination, wherein the poorer the quality of the test preparation, the greater must be the showing that the exam was properly jobrelated [sic], and vice versa"). See also HIGHHOUSE ET AL., *supra* note 29, at 32 (explaining that job analysis is considered necessary for building a selection system, as it is strongly encouraged by equal employment opportunity case law and identifies the most important parts of performance).

96. See Chelsey Dulaney, *Target Pays \$2.8 Million to Resolve Discrimination Charge*, WALL ST. J. (Aug. 24, 2015, 4:12 PM), <https://on.wsj.com/3mPtWZ5>.

97. See Paul Walsh, *Target to Pay \$2.8M to Upper-Level Applicants in EEOC Settlement*, STAR TRIB. (Aug. 24, 2015, 7:49 PM), <http://strib.mn/3mXpZIE>.

98. See Press Release, EEOC, Best Buy and EEOC Reach Agreement to Resolve Discrimination Charge (June 6, 2018), <https://bit.ly/32ZCL0V> [hereinafter EEOC Best Buy Press Release]; Press Release, EEOC, CVS Caremark Corporation and EEOC Reach Agreement to Resolve Discrimination Charge (June 6, 2018), <https://bit.ly/2G4xFYd> [hereinafter EEOC CVS Press Release]. Best Buy used the challenged assessments between 2003 and 2010, and CVS used them between 2002 and 2010. See *id.*

99. See Walsh, *supra* note 97.

100. See EEOC Best Buy Press Release, *supra* note 98; EEOC CVS Press Release, *supra* note 98.

The vendors of the modern self-report tests discussed in Section II.D contend that their tests survive disparate impact scrutiny for two reasons. First, vendors assert that their tests have no adverse impact based on race, sex, or national origin. The TalentSorter Assessment Technical Manual includes statistics indicating that its personality-based “fit scores” did not significantly differ based on gender, race, or age.¹⁰¹ Similarly, Hogan Assessments claims that its assessments have no adverse impact based on gender, ethnicity, or race,¹⁰² and FurstPerson asserts that its personality tests are “fair to all groups.”¹⁰³

Second, these vendors tout that their tests have been validated. AspiringMinds claims that its personality test has been scientifically validated for numerous job roles.¹⁰⁴ The TalentSorter Assessment Technical Manual summarizes several studies indicating the criterion-related validity of its “fit score”—in other words, that the score correlated with clients’ performance ratings of their employees.¹⁰⁵ Hogan Assessments states that more than 1,000 research studies have validated the Hogan Personality Inventory.¹⁰⁶

Section II.D contrasted self-report personality tests with the AI/algorithmic/data mining techniques utilized by Pymetrics and HireVue. Scholars have expressed concern that algorithmic hiring raises a substantial risk of discrimination.¹⁰⁷ A widely publicized example is Amazon’s machine-learning¹⁰⁸ hiring tool which, after observing patterns

101. THE TALENTSORTER DEVELOPMENT MANUAL, TALENTSORTER 21 (Sept. 2016) (on file with author). Age discrimination in employment is prohibited by the Age Discrimination in Employment Act (ADEA), rather than Title VII. 29 U.S.C. § 623 (2018). *See id.* Unlike Title VII, the ADEA does not allow applicants for employment, as opposed to existing employees, to assert claims under the disparate impact theory of discrimination. *See Kleber v. CareFusion Corp.*, 914 F.3d 480, 481 (7th Cir. 2019); *Villarreal v. R.J. Reynolds Tobacco Co.*, 839 F.3d 958, 961 (11th Cir. 2016).

102. *See About*, *supra* note 68; *Hogan Personality Inventory*, *supra* note 70; *see also* Scott Gregory, *Our Assessments Don’t Discriminate, But Many Do*, HOGAN ASSESSMENTS (July 3, 2018), <https://bit.ly/3kB0iLw>.

103. *Candidate Assessment Test for Behavioral Tendencies, Personality and Interpersonal Style*, *supra* note 74.

104. *See Products: Personality Test*, *supra* note 77. According to a company brochure, its assessments are “[b]acked by world-class I/O psychologists and dozens of patents” and are “fair, job-related, EEOC compliant and scientifically validated.” *Don’t Let the Right Ones Get Away*, ASPIRING MINDS (brochure on file with author).

105. *See* TALENTSORTER, *supra* note 101, at 15–17. According to the manual, “there is a very strong relationship between the TalentSorter FitScore and the probability of an individual being a top performer on the job.” *Id.* at 17.

106. *See Hogan Personality Inventory*, *supra* note 70.

107. *See, e.g.,* Ifeoma Ajunwa, *The Paradox of Automation as Anti-Bias Intervention*, 41 CARDOZO L. REV. 1671, 1694 (2020) [hereinafter Ajunwa *[Paradox]*]; Barocas & Selbst, *supra* note 78, at 677; Bodie et al., *supra* note 11, at 1020–28; Kim, *supra* note 11, at 874.

108. “Machine Learning is a current application of AI based around the idea that we should really just be able to give machines access to data and let them learn for

in resumes submitted to the company over a multi-year period, taught itself to discriminate against women—penalizing resumes including the word “women’s” and downgrading graduates of women’s colleges.¹⁰⁹ Given the historic dominance of men in the tech industry, basing hiring decisions on the traits of past applicants continued to favor men and disfavor women.¹¹⁰

While Amazon’s hiring tool taught itself to engage in intentional discrimination against female applicants, scholars are primarily concerned that algorithmic hiring will result in disparate impact discrimination.¹¹¹ Algorithms require training data; the model learns from the data to which it has been exposed.¹¹² Algorithmic hiring typically uses as training data the traits of existing top performers at a company, but if those top performers are not diverse, seeking to replicate them is unlikely to result in diversity.¹¹³ As explained by one group of scholars, “if women were excluded from leadership positions when the data about performance in those positions was collected, the computational model may continue to exclude women as good leadership candidates.”¹¹⁴

Even though scholars agree that algorithmic bias is likely, applicants may have a hard time proving it. Companies want to maintain the secrecy of their intellectual property, making it difficult for an

themselves.” Bernard Marr, *What is the Difference Between Artificial Intelligence and Machine Learning?*, FORBES (Dec. 6, 2016, 2:24 AM), <https://bit.ly/364j5Lg>.

109. See Jeffrey Dastin, *Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women*, REUTERS (Oct. 9, 2018, 7:04 PM), <https://reut.rs/3jaG6j2>; see also Kristin N. Johnson, *Automating the Risk of Bias*, 87 GEO. WASH. L. REV. 1214, 1223–24 (2019); Ajunwa [*Paradox*], *supra* note 107, at 3; Bornstein, *supra* note 78, at 521.

110. See Dastin, *supra* note 109. Amazon ultimately abandoned the tool, concerned that it would continue to find discriminatory ways of sorting candidates. See *id.*

111. See Barocas & Selbst, *supra* note 78, at 676; Bodie et al., *supra* note 11, at 1015 (discussing “the ways neutral uses of data could cause disparate effects on historically underrepresented groups”); see also Allan G. King & Marko J. Mrkonich, “Big Data” and the Risk of Employment Discrimination, 68 OKLA. L. REV. 555, 563–64 (2016) (stating that it “is far more probable that Big Data will be challenged because it unintentionally yields a disparate impact on one or more protected groups”). But see Bornstein, *supra* note 78, at 533–58 (challenging the characterization of algorithmic discrimination in the workplace as a disparate impact problem).

112. Barocas & Selbst, *supra* note 78, at 680.

113. See *id.* at 680–81 (explaining that “biased training data leads to discriminatory models . . . (1) if data mining treats cases in which prejudice has played some role as valid examples to learn from, that rule may simply reproduce the prejudice involved in these earlier cases; or (2) if data mining draws inferences from a biased sample of the population, any decision that rests on these inferences may systematically disadvantage those who are under- or overrepresented in the dataset”).

114. Bodie et al., *supra* note 11, at 1016; see also Barocas & Selbst, *supra* note 78, at 683–84 (“Because data mining relies on training data as ground truth, when those inputs are themselves skewed by bias or inattention, the resulting system will produce results that are at best unreliable and at worst discriminatory.”).

applicant to prove that an algorithm disproportionately excludes members of a protected class.¹¹⁵ Moreover, some scholars fear that the very nature of algorithmic hiring means that employers will always satisfy the “job-related and consistent with business necessity” defense to disparate impact discrimination—if the algorithm is based on the traits of top employees, then by definition it is closely tied to successful job performance.¹¹⁶ Proposed solutions to these problems include requiring employers to conduct internal and external audits of their hiring platforms to demonstrate both that no groups of applicants are excluded and that the hiring criteria sufficiently relate to job tasks.¹¹⁷

Pymetrics and HireVue contend that they specifically design their assessments to prevent algorithmic bias. Pymetrics audits its models to ensure that the behavioral traits extracted from the games have no adverse effect based on gender or ethnicity: “If bias is detected, problematic traits are reweighted and/or removed from the model until parity for different gender and ethnic groups is found, as tested on another independent baseline sample with gender and ethnicity data, resulting in the final model.”¹¹⁸ Similarly, HireVue tests its machine-

115. See Kim, *supra* note 11, at 863; King & Mrkonich, *supra* note 111, at 557; see also Lee Rainie & Janna Anderson, *Code-Dependent: Pros and Cons of the Algorithm Age*, PEW RES. CTR. (Feb. 8, 2017), <https://pewrsr.ch/3hXIYyG> (asserting that “[o]ne of the greatest challenges of the next era will be balancing protection of intellectual property in algorithms with protecting the subjects of those algorithms from unfair discrimination and social engineering”); Ajunwa [*Beware of Automated Hiring*], *supra* note 18 (explaining that automated hiring systems make it difficult for applicants to obtain proof of discrimination “because employers control the data in hiring platforms”). Applicants may not even realize that their application was rejected due to an algorithm. See CATHY O’NEIL, *WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY* 106 (2016).

116. Barocas & Selbst, *supra* note 78, at 706–07. As explained by Stephanie Bornstein, “[b]ecause a predictive-matching algorithm is, in essence, a criterion-validation study, even if it incorporates discriminatory data, a court could choose to excuse any disparate impact it causes because it selects employees in a way that is inherently job-related.” Bornstein, *supra* note 78, at 555.

117. See Ajunwa [*Beware of Automated Hiring*], *supra* note 18; Ajunwa [*Paradox*], *supra* note 107, at 1733 (arguing that “when an employer willfully neglects to audit and correct its automated hiring systems for unlawful bias, a prima facie intent to discriminate could be implied, pursuant to the proposed doctrine of *discrimination per se*”); see also Pauline T. Kim, *Auditing Algorithms for Discrimination*, 166 U. PA. L. REV. ONLINE 189, 202 (2017) (“Auditing is an essential strategy for detecting unintended bias and prompting the reexamination and revision of algorithms to reduce discriminatory effects.”); O’NEIL, *supra* note 115, at 208 (“To disarm WMDs, we . . . need to measure their impact and conduct algorithmic audits.”).

118. PYMETRICS OVERVIEW WHITEPAPER, *supra* note 79, at 3. Pymetrics conducts the audits using Audit-AI, its “open sourced solution to detecting bias in machine learning models.” *Id.* If, for example, men are scoring higher than women on a particular trait, Pymetrics “will de-weight that trait in the software’s model.” Leanna Garfield, *A Startup Claims to Have Finally Figured Out How to Get Rid of Bias in Hiring with Artificial Intelligence*, BUS. INSIDER (Sept. 25, 2017, 11:20 AM), <https://bit.ly/305mYeV>.

learning algorithms to ensure that they have no adverse impact based on gender, race, ethnicity, or age.¹¹⁹ If an algorithm has an adverse impact, HireVue identifies and removes the factors contributing to that impact.¹²⁰ According to the company, “[i]t’s possible to remove problematic factors and still maintain a highly accurate predictive capability because so many potential data points from the interview can be considered in the model.”¹²¹

Unilever, a global consumer-goods company, used both Pymetrics and HireVue to transform its hiring process, and reported tremendous success in both cost-efficiency and diversity.¹²² The company’s previous practice was sending representatives to select universities, collecting resumes, and then conducting phone interviews of top candidates.¹²³ Under the new approach, candidates submit their LinkedIn profiles, then spend 20 minutes playing Pymetrics neuroscience games.¹²⁴ If their results match the profile for a particular position, candidates record a HireVue video interview.¹²⁵ If the HireVue algorithm also suggests they are a match, Unilever invites the candidate to spend a day in a company office, experiencing what the job would entail.¹²⁶ At the end of that day, a manager decides whether to extend the candidate a job offer.¹²⁷ The new algorithmic approach to hiring resulted in many more applications for jobs and a dramatically shorter average time for a candidate to be hired—from four months to four weeks.¹²⁸ It also led to Unilever’s most diverse class of new hires ever, based on race, ethnicity, and gender.¹²⁹

Noticeably absent from employers’ and vendors’ discussions of the diversity benefits of pre-employment personality tests, however, is the effect of such tests on another protected class: individuals with disabilities.

119. See Loren Larsen, *Train, Validate, Re-train: How We Build HireVue Assessments Models*, HIREVUE (June 21, 2018), <https://hir.vu/3cCt8IN>.

120. See *id.*

121. *Id.*

122. See Richard Feloni, *Consumer-Goods Giant Unilever Has Been Hiring Employees Using Brain Games and Artificial Intelligence – and It’s a Huge Success*, BUS. INSIDER (Jun. 28, 2017, 9:30 AM), <https://bit.ly/2ZYN4jR>.

123. See *id.* This approach was inefficient: “Candidates filled out a paper-based application that took approximately 45 minutes to complete. The application focused on an individual’s resume and experience. Unilever recruiters then conducted live telephone interviews with as many as 50,000 applicants. Each interview took approximately one hour.” CHRISTA MANNING, *RECRUITING MILLENNIALS: UNILEVER GOES DIGITAL TO TRANSFORM ITS GRADUATE HIRING PROGRAM 6* (2017), <https://bit.ly/2F5J2yI>.

124. See Feloni, *supra* note 122.

125. See *id.*

126. *Id.*

127. *Id.*

128. *Id.*

129. *Id.*

B. The Americans with Disabilities Act

The Americans with Disabilities Act (ADA) protects qualified individuals with disabilities from employment discrimination because of their disabilities.¹³⁰ An individual has a disability under the ADA if he or she has a mental or physical impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment.¹³¹ Major life activities include speaking, learning, reading, concentrating, thinking, communicating, and working.¹³² An individual is qualified under the ADA if he or she can perform the essential functions of a job, with or without reasonable accommodation,¹³³ and an employer violates the ADA by failing to accommodate the known limitations of an otherwise qualified disabled individual.¹³⁴ However, an employer need not provide an accommodation that would impose an undue hardship on the conduct of its business.¹³⁵

Like Title VII, the ADA prohibits disparate impact discrimination, barring qualification tests and standards that screen out an individual or individuals on the basis of disability unless the employer can prove job-relatedness and business necessity.¹³⁶ One significant difference between the ADA and Title VII is referenced above: the ADA imposes an affirmative duty of reasonable accommodation upon employers.¹³⁷ Another difference between the two statutes is that the ADA prohibits medical examinations and inquiries before an employer extends an offer of employment.¹³⁸

The ADA has a blanket prohibition on medical examinations of job applicants.¹³⁹ Employers may not conduct medical examinations of job applicants or make inquiries as to whether the applicant has a disability or the nature or extent of such disability.¹⁴⁰ They may require medical examinations or make disability-related inquiries of existing employees

130. *See* 42 U.S.C. § 12112(a) (2018).

131. *See id.* § 12102(1). In 2008, Congress amended the ADA to clarify that the definition of disability should not be an insurmountable hurdle for plaintiffs. *See* ADA Amendments Act of 2008 (ADAAA), Pub. L. No. 110-325, 122 Stat. 3553. The ADAAA provides that “[t]he definition of disability in this Act shall be construed in favor of broad coverage of individuals under this Act.” *Id.* § 12102(4)(A).

132. *See id.* § 12102(2)(A).

133. *See id.* § 12111(8).

134. *See id.* § 12112(5)(A).

135. *Id.*

136. *See id.* § 12112(b)(6).

137. *See id.* § 12112(5)(A).

138. *See id.* § 12112(d)(2)(B).

139. *Id.*

140. *See id.* If an employer has made an offer of employment to an applicant, prior to that applicant’s starting work, the employer may require an employment entrance medical examination. *See id.* § 12112(d)(3).

only if the examination or inquiry is job-related and consistent with business necessity.¹⁴¹ Unlike the other provisions of the ADA, an individual need not have a disability to challenge a medical examination.¹⁴²

The EEOC defines a “medical examination” as “a procedure or test that seeks information about an individual’s physical or mental impairments or health.”¹⁴³ Relevant factors include:

- (1) whether the test is administered by a health care professional;
- (2) whether the test is interpreted by a health care professional;
- (3) whether the test is designed to reveal an impairment or physical or mental health;
- (4) whether the test is invasive;
- (5) whether the test measures an employee’s performance of a task or measures his/her physiological responses to performing the task;
- (6) whether the test is normally given in a medical setting; and
- (7) whether medical equipment is used.¹⁴⁴

In some cases, one factor may be sufficient to indicate that a test is medical.¹⁴⁵

According to the EEOC, psychological tests “designed to identify a mental disorder or impairment” are medical, but tests that “measure personality traits such as honesty, preferences, and habits” are not.¹⁴⁶ The EEOC contrasts a test that “reflects whether applicants have characteristics that lead to identifying whether the individual has excessive anxiety, depression, and certain compulsive disorders,” with one that is “designed and used to reflect only whether an applicant is likely to lie.”¹⁴⁷ The former is a medical examination; the latter is not. Moreover, if an employer gives a psychological test that is designed to reveal mental illness, “is interpreted by a psychologist, and is routinely used in a clinical setting to provide evidence that would lead to a

141. *See id.* § 12112(d)(4)(A).

142. *See* *Harrison v. Benchmark Elecs. Huntsville, Inc.*, 593 F.3d 1206, 1213 (11th Cir. 2010); *Griffin v. Steeltek, Inc.*, 160 F.3d 591, 594 (10th Cir. 1998); *see also* EQUAL EMPLOYMENT OPPORTUNITY COMM’N, ENFORCEMENT GUIDANCE ON DISABILITY-RELATED INQUIRIES AND MEDICAL EXAMINATIONS OF EMPLOYEES UNDER THE AMERICANS WITH DISABILITIES ACT (ADA) n.15 (2000), <https://bit.ly/32ZJYOx> [hereinafter *EEOC Enforcement Guidance*] (stating that “[t]he ADA’s restrictions on disability-related inquiries and medical examinations apply to individuals both with and without disabilities at all three stages: pre-offer, post-offer, and during employment”).

143. *EEOC Enforcement Guidance*, *supra* note 142, ¶ B.2.

144. *Id.*

145. *See id.*

146. *Id.*

147. EEOC, ADA ENFORCEMENT GUIDANCE: PREEMPLOYMENT DISABILITY-RELATED QUESTIONS AND MEDICAL EXAMINATIONS (1995), <https://bit.ly/33XLiRd>.

diagnosis of a mental disorder,” the test is medical even if the employer claims to use the test only to disclose tastes and habits.¹⁴⁸

The ADA’s prohibitions of disparate impact discrimination and of pre-offer medical examinations, together with its reasonable accommodation requirement, pose potential obstacles to employers’ use of personality assessments in hiring.

C. ADA Challenges to Personality Testing

1. *Karraker v. Rent-A-Center, Inc.*

To date, only one published judicial opinion, *Karraker v. Rent-A-Center, Inc.*,¹⁴⁹ squarely addresses whether pre-employment personality testing violates the ADA. The plaintiffs were brothers who worked for Rent-A-Center (“RAC”) and sought promotion to management positions. RAC required those seeking promotion to take the APT Management Trainee-Executive Profile, which consisted of nine tests intended to measure personality traits, interests, and math and language skills.¹⁵⁰ The APT Test included 502 questions from the Minnesota Multiphasic Personality Inventory (“MMPI”), including the following true/false questions: “I see things or animals or people around me that others do not see”; “I commonly hear voices without knowing where they are coming from”; “At times I have fits of laughing and crying that I cannot control”; “My soul sometimes leaves my body”; “At one or more times in my life I felt that someone was making me do things by hypnotizing me”; and “I have a habit of counting things that are not important such as bulbs on electric signs, and so forth.”¹⁵¹ RAC refused to consider for promotion any “applicant who had more than 12 ‘weighted deviations’”¹⁵² on the APT test, all parts of which were scored together. The plaintiffs, all of whom were ineligible for promotion due to their APT scores, sued RAC contending that the company’s use of the MMPI violated the ADA.¹⁵³ The parties agreed that the tests at issue should be considered pre-employment, even though the plaintiffs were already

148. *Id.*

149. See *Karraker v. Rent-A-Center, Inc.*, 411 F.3d 831, 837 (7th Cir. 2005) (stating that “even though the MMPI was only a part (albeit a significant part) of a battery of tests administered to employees looking to advance, its use, we conclude, violated the ADA”).

150. See *id.* at 833. Rent-A-Center had hired the company Associated Personnel Technicians “to produce an extensive personality inventory to each manager: how self-sufficient, self-confident, and dominant he or she was, how fearful, depressive, and impetuous.” PAUL, *supra* note 20, at 62.

151. *Karraker*, 411 F.3d at 833 n.1.

152. *Id.* at 834.

153. *Id.*

employed by RAC, because RAC required that those seeking new positions take the tests.¹⁵⁴

The key question in *Karraker* was whether the MMPI constituted a “medical examination” under the ADA, such that RAC’s administration of the test to applicants violated the statute.¹⁵⁵ Both the district court and the court of appeals agreed that only one of the EEOC’s seven factors¹⁵⁶ was at issue: whether the test was designed to reveal mental-health impairments.¹⁵⁷ The MMPI measures eight scores: “hypochondriasis, depression, hysteria, psychopathic deviate, paranoia, psychasthenia, schizoid tendencies, and mania.”¹⁵⁸ It was undisputed that the MMPI could measure pathological functioning and could be used in a clinical setting to help diagnose mental disorders.¹⁵⁹ Nonetheless, the district court was convinced that the test, as used by RAC “solely for the purposes of discerning personality traits of its employees or applicants,” was not a medical examination.¹⁶⁰ RAC’s expert witness, a clinical psychologist, testified that the eight scores were “personality traits found to some extent in almost everyone,” rather than psychological diagnoses or disorders.¹⁶¹ Moreover, the district court noted that RAC used a vocational scoring protocol focusing on personality traits rather than a clinical protocol and did not have a psychologist interpret the results.¹⁶²

In contrast, the United States Court of Appeals for the Seventh Circuit considered the probable effect of the test on individuals with mental impairments rather than just the employer’s scoring protocol or its stated motivation for using the test.¹⁶³ According to the court,

[T]he practical effect of the use of the MMPI is similar no matter how the test is used or scored—that is, whether or not RAC used the test to weed out applicants with certain disorders, its use of the MMPI likely had the effect of excluding employees with disorders from promotion.¹⁶⁴

154. *Id.* at 835.

155. *Id.*

156. *See supra* note 144 and accompanying text (discussing the seven relevant factors that the EEOC considers in determining whether a medical examination occurred).

157. *See Karraker v. Rent-A-Center, Inc.*, 316 F. Supp. 2d 675, 680 (C.D. Ill. 2004); *see also Karraker*, 411 F.3d at 835.

158. *See Karraker*, 316 F. Supp. 2d at 680.

159. *See id.*

160. *Id.* at 681.

161. *Id.* at 680–81.

162. *See id.* at 836.

163. *See Karraker*, 411 F.3d at 837.

164. *Id.* at 836–37.

The court accepted the contention of RAC's expert that a high score on the MMPI's paranoia scale does not mean that a person is diagnosed with paranoid-personality disorder.¹⁶⁵ The court reasoned, however, that a person with such a disorder would likely register a high score on the paranoia scale, which could result in test failure and the loss of an opportunity for promotion.¹⁶⁶ Moreover, the court rejected the contention of RAC's counsel that the MMPI merely tested a current "state of mood," which anyone might feel from time to time, rather than clinical depression.¹⁶⁷ Reasoning that no employer would want to exclude an applicant just because he happened to feel sad on the day of testing, the court stated: "We see two possibilities: either the MMPI was a very poor predictor of an applicant's potential as a manager (which might be one reason it is no longer used by RAC), or it actually was designed to measure more than just an applicant's mood on a given day."¹⁶⁸ The court concluded that the MMPI was "best categorized as a medical examination" because it was "designed, at least in part, to reveal mental illness and has the effect of hurting the employment prospects of one with a mental disability."¹⁶⁹

2. Agency Actions Against Target and CVS

The Equal Employment Opportunity Commission (EEOC) and analogous state agencies have challenged several employers' use of pre-employment personality testing as discriminatory based on disability. The 2015 EEOC settlement with Target regarding the company's use of assessments with a disparate impact based on race and sex¹⁷⁰ also included an EEOC finding of an ADA violation. Specifically, the EEOC found that Target's use of an assessment performed by psychologists during its hiring process violated the ADA's prohibition of pre-offer medical examinations.¹⁷¹

In 2009, the Rhode Island American Civil Liberties Union ("RI ACLU") filed a complaint with the state's Human Rights Commission regarding CVS Pharmacy's use of personality testing as part of its online

165. *See id.* at 837. According to the expert, "an elevated score on the [paranoia] scale is one of several symptoms which may contribute to a diagnosis of paranoid personality disorder." *Id.*

166. *See id.*

167. *See id.* at 835–36.

168. *Id.* at 836.

169. *Id.* at 837.

170. *See supra* notes 94–95 and accompanying text.

171. *See Dulaney, supra* note 96. The assessment at issue was "reserved for particular leadership openings." Walsh, *supra* note 97.

job-application process.¹⁷² The test required applicants to indicate whether they strongly disagree, disagree, agree, or strongly agree with about 100 “attitudinal” statements, including: “You change from happy to sad without any reason”; “You get angry more often than nervous”; “Your moods are steady from day to day”; and “There’s no use having close friends; they always let you down.”¹⁷³ Based on the description of the test in the ACLU’s press release, it appears to be the Unicru test discussed in Section II.C above.¹⁷⁴

The RI ACLU contended that the questions “could be used to seek information about an applicant’s mental health, or could have the effect of discriminating against applicants with certain mental impairments or disorders,” specifically mentioning depression, ADHD, social anxiety, and other affective disorders.¹⁷⁵ The Rhode Island Commission for Human Rights found probable cause to believe that the application questions violated state laws prohibiting employers from eliciting information pertaining to applicants’ disabilities.¹⁷⁶ Although CVS submitted expert testimony contending that the questions could not be used to identify individuals with disabilities, it settled the complaint and agreed to remove the questions at issue from its application.¹⁷⁷

3. *EEOC v. Kronos*

The Unicru personality test was also at issue in a prolonged dispute between the EEOC and Kronos, Inc. regarding the scope of an administrative subpoena.¹⁷⁸ Vicky Sandy, an individual with hearing and speech impairments, applied at a Kroger store in May 2007 for a position as a cashier, bagger, or stocker.¹⁷⁹ Kroger required applicants for those positions to take a Customer Service Assessment (“the Assessment”) created by Kronos, which purported to “measure [] the human traits that underlie strong service orientation and interpersonal skills, such as:

172. See Press Release, ACLU, ACLU Files Discrimination Claim Against CVS (Oct. 21, 2009), <https://bit.ly/3i0P9Sv>.

173. *Id.*

174. All four questions provided as examples are identical to ones listed in the blog post “Some Answers to the Unicru personality test.” Horrigan, *supra* note 56; see also Shebel, *supra* note 56.

175. Press Release, ACLU *supra* note 172.

176. See Press Release, ACLU, Human Rights Commission Finds “Probable Cause” that CVS Application Form is Discriminatory (Feb. 10, 2011), <https://bit.ly/2FOjczT>; see also RI Gen. Laws § 28-5-7(4)(i) (2019) (making it an unlawful employment practice for an employer to “[e]licit or attempt to elicit any information directly pertaining to [an applicant’s] . . . disability”).

177. See Press Release, ACLU of R.I., ACLU and CVS/Pharmacy Resolve Discrimination Complaint (July 19, 2011), <https://bit.ly/3j4qoGu>.

178. See *E.E.O.C. v. Kronos Inc.*, 694 F.3d 351, 354 (3d Cir. 2012).

179. See *E.E.O.C. v. Kronos Inc.*, 620 F.3d 287, 292 (3d Cir. 2010).

Controlling impatience; Showing respect; Listening attentively; Working well on a team; [and] Being sensitive to others' feelings.”¹⁸⁰ The description of the challenged Assessment in judicial opinions indicates that it was a version of the Unicru test.¹⁸¹ Sandy received a score of 40% on the Assessment.¹⁸²

The Kroger store manager declined to hire Sandy after interviewing her, noting that he had trouble understanding her verbal responses to questions and that she received a low score on the Assessment.¹⁸³ Sandy then filed a charge of discrimination with the EEOC against Kroger.¹⁸⁴ Kroger admitted in its position statement that it relied, at least in part, on the Assessment when it decided not to hire Sandy.¹⁸⁵ After failing to obtain from Kroger validity studies underlying the Assessment,¹⁸⁶ the EEOC issued a third-party administrative subpoena to Kronos, seeking validity studies related to the Kronos tests Kroger purchased, instruction manuals for those tests, documents related to Kroger, validation efforts regarding any jobs at Kroger, documents related to potential adverse impact on individuals with disabilities, and job analyses of all positions at Kroger.¹⁸⁷ The EEOC later expanded its investigation to be nationwide and issued a new subpoena directing Kronos to produce any documents

180. *Id.* (alterations in original).

181. The United States Court of Appeals for the Third Circuit described the assessment as follows:

The Assessment consists of fifty statements, to which the applicant must answer “strongly disagree,” “disagree,” “agree,” or “strongly agree.” It includes statements such as the following: “You have confidence in yourself”; “You are always cheerful”; “You try to sense what others are thinking and feeling”; “You say whatever is on your mind”; and “It is easy for you to feel what others are feeling.”

Id. at 292 n.1. These questions are identical to ones listed in blog posts regarding the Unicru test. *See* Horrigan, *supra* note 56; Shebel, *supra* note 56. Kronos, a human resources technology company, purchased the software firm Unicru in 2006, intending Unicru to operate as Kronos’s Talent Management Division. *Kronos(R) Announces Agreement to Acquire Unicru; Combination of Workforce Management and Talent Management Solutions Provides Foundation for Broader HCM Offering and Global Growth*, BUS. WIRE (July 13, 2006, 8:15 AM), <https://bwnews.pr/2RSVoNw>; Staff Report, *Kronos Expands Offerings Following Unicru Acquisition*, WORKFORCE.COM (Aug. 8, 2006), <https://bit.ly/3mROZR9>; *see also* Weber & Dwoskin, *supra* note 3 (stating that Kroger’s personality tests were created by Unicru and administered by Kronos, which bought Unicru in 2006).

182. *See Kronos Inc.*, 620 F.3d at 292.

183. *See id.* at 293.

184. *See id.* at 292.

185. *See id.* at 293.

186. The EEOC sent Kroger a request for information seeking numerous documents relating to the Assessment, including validity studies. *See id.* Kroger responded to the request but did not provide validity studies, and the EEOC was unsure whether Kroger had access to Kronos’s validity studies. *See id.*

187. *See id.*

regarding potential adverse impact on individuals with disabilities, as well as any job analyses relating to positions at Kroger.¹⁸⁸

Kronos objected to the subpoena as requesting information that was outside the scope of Sandy's EEOC charge and that constituted Kronos's trade secrets.¹⁸⁹ After the EEOC filed a Subpoena Enforcement Action, the district court significantly narrowed the subpoena after characterizing its scope as "breathtaking—potentially including most of Kronos' business documents, covering its entire client base, with no time, geographic, or job description limitations."¹⁹⁰ The United States Court of Appeals for the Third Circuit held that the district court had abused its discretion in limiting the subpoena, reasoning:

If Kronos has information relating to whether its Assessment has an adverse impact on disabled people, that information is clearly relevant as to whether Kroger violated the ADA by using the Assessment. Additionally, information pertaining to the validity of the test, even if it was not "performed specific[ally] for and only for Kroger," could assist the EEOC in evaluating whether Kroger's use of the test constituted an unlawful employment action.¹⁹¹

After the Third Circuit remanded the case back to the district court, that court again narrowed the subpoena, resulting in another appeal.¹⁹² The Third Circuit reiterated that the EEOC was entitled to a broad range of Kronos's data.¹⁹³ The court noted that the ADA prohibits employment tests like the Assessment when they screen out or tend to screen out individuals with disabilities and where the use of the test is not job-related and consistent with business necessity.¹⁹⁴ Accordingly, it was proper for the EEOC "to seek information about how these tests work, including information about the types of characteristics they screen out and how those characteristics relate to the applicant's ability to fulfill his or her duties for the prospective position."¹⁹⁵ Kronos and the EEOC ultimately stipulated to a dismissal of the Subpoena Enforcement Action

188. *See id.* at 294. The EEOC also expanded its investigation to include race discrimination with respect to the use of the Assessment and subpoenaed Kronos documents relating to adverse impact based on race. *See id.*

189. *See id.*

190. *Id.*

191. *Id.* at 299 (alteration in original). The court agreed, however, that the EEOC's inquiry into potential race discrimination, *see supra* note 188, was an impermissible fishing expedition rather than a reasonable expansion of Sandy's charge. *See id.* at 301.

192. *See E.E.O.C. v. Kronos Inc.*, 694 F.3d 351, 355 (3d Cir. 2012) (explaining that "[o]n remand, the District Court expanded the scope of its original order, but again placed certain limitations on the disclosure of information related to the Kronos tests").

193. *See id.* at 355, 357.

194. *See id.* at 357.

195. *Id.* at 364.

in February 2016, almost seven years after the EEOC first filed the action.¹⁹⁶

The judicial opinions in *E.E.O.C. v. Kronos Inc.* contain no discussion on the merits of whether the Kronos Assessment, as used by Kroger, had a disparate impact on individuals with disabilities or whether it was job-related and consistent with business necessity. However, in its Third Circuit brief in *Kronos II*, the company stated that “Kronos does not collect disability information from applicants taking Kronos assessments, has no way of knowing whether applicants have any disabilities or which disabilities they may have, does not and cannot perform any adverse impact analysis with regard to applicants with disabilities, and has never done a validation study for Kroger or any other client, related to disability, and would be unable to do so without disability-related applicant data.”¹⁹⁷

4. Kyle Behm

In September 2014, the issue of pre-employment personality tests potentially discriminating against applicants with certain mental disabilities received coverage in the *Wall Street Journal*, along with a photograph of Kyle Behm, a young man with bipolar disorder.¹⁹⁸ While a college student, Kyle was looking for a part-time minimum-wage job.¹⁹⁹ A friend told Kyle that he was about to leave his job as a pharmacy technician at the local Kroger store and that Kyle would be a good choice to fill the opening.²⁰⁰ Kyle went to the store and met the hiring manager; his friend vouched for him; and Kyle then completed the online application process, which included the Kronos/Unicru personality test.²⁰¹

Despite Kyle’s qualifications, Kroger never called him for an interview, and Kyle’s friend told him that he had been “red-lighted” by the personality test.²⁰² Kyle told his father Roland Behm, an attorney,

196. See *E.E.O.C. v. Kronos Inc.*, docket 2:09-MC-0079 (W.D. Pa., Feb. 12, 2016).

197. Brief of Kronos Incorporated as Appellee, *E.E.O.C. v. Kronos Inc.*, No. 11-2834, 2012 WL 371622, at *9 (3d Cir. Jan. 23, 2012).

198. See Weber & Dwoskin, *supra* note 3.

199. See O’NEIL, *supra* note 115, at 105. Kyle began his college studies at Vanderbilt University, until he took a leave of absence for treatment for bipolar disorder. *See id.* At the time he applied for a part-time job, he had returned to college at Mercer University and was studying engineering. *See* Weber & Dwoskin, *supra* note 3.

200. See O’NEIL, *supra* note 115, at 105; *see also* Interview with Roland Behm, Father of Kyle Behm, [Atlanta, Ga.] (Mar. 26, 2019).

201. See O’NEIL, *supra* note 115, at 105–06; Weber & Dwoskin, *supra* note 3; *see also* Interview with Roland Behm, *supra* note 200. Screenshots of the more than 75 questions on the test are on file with the author.

202. O’NEIL, *supra* note 115, at 105–06. Kyle’s friend told him that his scoring in the red “indicated that he might ignore customers if he felt upset or angry,” and meant

that he recognized some of the questions as similar to those he had been asked while undergoing treatment for bipolar disorder.²⁰³ Specifically, the questions appeared related to the Five Factor Model of Personality.²⁰⁴ Roland then encouraged Kyle to apply for hourly jobs at six other employers, including PetSmart and Lowe's, all of whom included the same or a similar personality test as part of their online application process.²⁰⁵ Kyle received no job offers, leaving him and his father to believe that the personality test was screening him out based on his disability and perhaps even constituted a pre-offer medical examination prohibited by the ADA.²⁰⁶

Kyle's situation amounted to a perfect storm of factors for questioning the lawfulness of pre-employment personality testing.²⁰⁷ Most individuals who take personality tests as part of an online job application never learn that their test score caused their rejection.²⁰⁸ Most individuals who take personality tests as part of an online job application do not recognize questions on the test as similar to questions used for the diagnosis and treatment of mental disabilities.²⁰⁹ Most individuals who take personality tests as part of an online job application do not have a family member with the legal training and experience to challenge such tests.²¹⁰ But Kyle had all three, and he and his father proceeded to contact Kroger and the six other employers about their concerns.²¹¹

PetSmart's letter responding to Kyle and his father is instructive for both its description of how the company developed and used the personality test and its contention that the test complied with the ADA.²¹² The letter explains that PetSmart purchased an applicant-assessment tool, including a Customer Service/Dependability assessment, from Kronos in 2005.²¹³ Kronos, rather than PetSmart, was the lead actor in both the

that Kroger could not hire him. Weber & Dwoskin, *supra* note 3; *see also* Interview with Roland Behm, *supra* note 200.

203. *See* O'NEIL, *supra* note 115, at 106.

204. *See id.*

205. *See id.* at 106; *see also* Interview with Roland Behm, *supra* note 200.

206. *See* O'NEIL, *supra* note 115, at 106-07; *see also* Interview with Roland Behm, *supra* note 200.

207. O'Neil, *supra* note 18.

208. *See* O'NEIL, *supra* note 115, at 106 (noting that "people who apply for a job and are red-lighted rarely learn that they were rejected because of their test results").

209. *See id.* at 106-07.

210. *See id.* at 111 (noting that "the case against the big Kronos users would likely have gone nowhere if Kyle's father hadn't been a lawyer, one with enough time and money to mount a broad legal challenge").

211. *See* Weber & Dwoskin, *supra* note 3.

212. *See* Letter from Alexis L. Pheiffer, Senior Counsel Labor and Employment, PetSmart, to Roland Behm (Aug. 23, 2012) [hereinafter Pheiffer Letter] (on file with author).

213. *See id.*

development and use of the test: “Kronos drafted the assessment questions, conducted all validation testing, and helped PetSmart choose the configuration of tests for each position.”²¹⁴ Kronos calibrated the tests to determine scoring, such that 50% of the applicants receive a Green score, 25% receive a Yellow score, and 25% receive a Red score.²¹⁵ Kronos scored the tests via computer and sent PetSmart’s hiring managers the Green, Yellow, or Red score for each applicant.²¹⁶ The letter acknowledges that “PetSmart discourages hiring of applicants who receive a Red overall on the Kronos assessments.”²¹⁷

PetSmart contended that, based on the information it received from Kronos, the assessments were not medical examinations:

PetSmart incorporated the Kronos assessments into its job application process because, among other things, it believed that the assessments had been specifically developed as a selection device in the employment context. PetSmart also believed that the assessments were not derived from any medical examinations or tests used previously in the medical or psychological context, and were not designed to be diagnostic of any medical or psychological conditions. Further, PetSmart understood that the assessments had never been marketed or used for purposes of diagnosing medical disabilities, psychological impairments, or the like and that the assessments met all other legal and regulatory requirements, including compliance with the ADA and state law. In sum, PetSmart believed that Kronos’ [sic] assessments would help it identify applicants who were more likely to demonstrate successful on-the-job behaviors and to remain in their jobs for a longer period of time—both features directly linked to PetSmart’s business needs, customer satisfaction, and associate success.²¹⁸

PetSmart also asserted that there was no evidence that the assessments had a disparate impact on applicants with disabilities.²¹⁹ The company stated that it does not track disability data on its applicants “because it is illegal to inquire into an applicant’s potential disabilities,” that it had “seen no evidence that qualified individuals with disabilities perform differently than others on the Kronos assessments,” and that the assessments were both job-related and consistent with business necessity.²²⁰ On the latter point, PetSmart stated that since it began using

214. *Id.*

215. *Id.*

216. *Id.*

217. *Id.*

218. *Id.*

219. *See id.*

220. *Id.*

the assessments, its overall customer satisfaction scores had increased, and employee turnover in its stores had dramatically decreased.²²¹

Kyle and his father filed complaints with the EEOC against all seven employers for violating the ADA, and learned that the EEOC was conducting an investigation of Kroger and PetSmart's use of pre-employment personality assessments.²²² That investigation is ongoing.²²³ Kyle and his father negotiated settlements with two of the employers.²²⁴ Lowe's, one of the settling employers, issued a press release regarding changes to its online application process for retail employees.²²⁵ According to the statement, Lowe's partnered with the Judge David L. Bazelon Center for Mental Health Law "to modify the online testing process to better ensure it does not unnecessarily prevent people with mental health disabilities from finding jobs and making valuable contributions to the workforce."²²⁶

IV. DO MODERN PERSONALITY TESTS PASS MUSTER UNDER THE ADA?

Might the modern pre-employment personality assessments discussed in Section II.D violate the ADA, either because they constitute medical examinations or because they tend to screen out individuals with particular mental impairments and are not job-related or consistent with business necessity?

A. *Pre-Employment Medical Examinations*

Modern pre-employment personality assessments do not constitute medical examinations. *Karraker* established that an employer using a personality test based on the MMPI violates the ADA because the test "was designed, at least in part, to reveal mental illness and has the effect of hurting the employment prospects of one with a mental disability."²²⁷ The court in *Karraker* found it to be sufficient that one of the EEOC's seven "medical examination" factors—whether the test is designed to reveal an impairment—was met where the test also tended to exclude individuals with mental impairments. Given that the MMPI was developed in a clinical context to sort patients at a mental hospital into

221. *See id.*

222. *See* Interview with Roland Behm, *supra* note 200.

223. *See id.*

224. *See id.*

225. *See* Press Release, Bazelon Center for Mental Health Law, Lowe's Announces Changes to Online Application Process for Retail Employees (Nov. 17, 2017), <https://bit.ly/3mMC3M9>.

226. *Id.*

227. *Karraker v. Rent-A-Center, Inc.*, 411 F.3d 831, 837 (7th Cir. 2005); *see also supra* Section III.C.1.

categories and distinguish them from “Minnesota Normals,”²²⁸ it cannot be disputed that the test was designed to reveal mental impairments. Employers seeking to assess the personalities of job applicants should not use the MMPI or a test based on the MMPI. Even if employers claim that they used a vocational rather than a clinical scoring profile and did not have a psychologist interpret the results, the test nonetheless constitutes a medical examination.²²⁹

Modern pre-employment personality tests, however, are generally based on the Five Factor Model of Personality, not on the MMPI.²³⁰ Unlike the MMPI, the Five Factor Model was not designed to reveal mental impairments. Psychologists developed the model by categorizing the natural language terms people use to describe their personalities and those of others; researchers did not focus on words connected to mental impairments or to abnormal personalities.²³¹ Moreover, the Five Factor Model is not a specific test but rather an “empirical generalization about the covariation of personality traits.”²³² It is a general theory, confirmed by hundreds of studies, that personality can be meaningfully understood and measured in terms of the five broad dimensions of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.²³³ That theory has led to a variety of personality tests.²³⁴ PetSmart’s response to Kyle Behm’s assertion that the Kronos/Unicru assessments (based on the Five Factor Model) were medical examinations emphasized that the “assessments were not derived from

228. See *supra* notes 23–27 and accompanying text.

229. See *Karraker*, 411 F.3d at 836–37 (concluding that, despite the fact that RAC used a vocational scoring profile for the MMPI and did not have a psychologist interpret the results, “the MMPI is best categorized as a medical examination”).

230. Most pre-employment personality tests are based on the Five Factor Model. See *Weber*, *supra* note 42; *Meinhert*, *supra* note 42.

231. See *John et al.*, *supra* note 36, at 118–21; see also R. Michael Bagby & Thomas A. Widiger, *Five Factor Model Personality Disorder Scales: An Introduction to a Special Section on Maladaptive Variants of the Five Factor Model*, 30 *PSYCHOLOGICAL ASSESSMENT* 1, 1 (2018) (stating that the “existing measures of the FFM have been confined largely to the ‘normal’ range of personality functioning”); Timothy J. Trull, *The Five-Factor Model of Personality and DSM-5*, 80 *J. PERSONALITY* 1697, 1698 (2012) (“The FFM was originally developed using nonclinical samples.”); *HOFFMAN*, *supra* note 5, at 24 (stating that the Five Factor Model addressed “normal human personality”).

232. Robert R. McCrae & Paul T. Costa, Jr., *The Five-Factor Theory of Personality*, in *HANDBOOK OF PERSONALITY: THEORY AND RESEARCH* 159, 159 (Oliver P. John et al. eds., 3d ed. 2008); see also *AM. PSYCHIATRIC ASS’N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS* 772 (5th ed. 2013) (“A personality trait is a tendency to feel, perceive, behave, and think in relatively consistent ways across time and across situations in which the trait may manifest.”).

233. See *HOFFMAN*, *supra* note 5, at 24, 103.

234. See *John et al.*, *supra* note 36, at 130 (“The availability of so many different instruments to measure the Big Five makes clear that there is no single instrument that represents *the gold standard*.”).

any medical examinations or tests used previously in the medical or psychological context, and were not designed to be diagnostic of any medical or psychological condition.”²³⁵

While the Five Factor Model (“FFM”) was not designed to reveal mental impairments, numerous psychological studies have demonstrated a relationship between the Model’s traits and various personality disorders.²³⁶ According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (“DSM-5”), “a personality disorder is a pattern of inner experience or behavior that deviates from the expectations of one’s culture, causes distress or impairment, and lasts over time,”²³⁷ and personality disorders may constitute disabilities under the ADA.²³⁸ Researchers have concluded that the Five Factor Model “is capable of linking normal personality traits with disordered personality features.”²³⁹ In fact, in addition to the categorical model of personality-disorder diagnosis carried over from the DSM-IV,²⁴⁰ the DSM-5 includes an alternative model based on impairments in personality functioning and pathological personality traits.²⁴¹ The pathological personality traits are “maladaptive variants of the five domains of the extensively validated and replicated personality model known as the ‘Big Five,’ or Five Factor Model of personality.”²⁴² For example, Antagonism is the opposite pole from the Five Factor Model’s Agreeableness, and pathological personality traits contained within Antagonism include manipulativeness and deceitfulness²⁴³—both of which the DSM-5

235. Pfeiffer letter, *supra* note 212.

236. *See* Trull, *supra* note 231, at 1699.

237. AM. PSYCHIATRIC ASS’N, *supra* note 232, at 645. Recognized personality disorders include paranoid personality disorder, schizoid personality disorder, schizotypal personality disorder, antisocial personality disorder, borderline personality disorder, histrionic personality disorder, narcissistic personality disorder, avoidant personality disorder, dependent personality disorder, obsessive-compulsive personality disorder, and personality change due to another medical condition. *See id.*

238. The EEOC’s Enforcement Guidance on the ADA and Psychiatric Disabilities describes “emotional or mental illness[es]” as including “major depression, bipolar disorder, anxiety disorders (which include panic disorder, obsessive compulsive disorder, and post-traumatic stress disorder), schizophrenia, and personality disorders.” EQUAL EMP’T OPPORTUNITY COMM’N, EEOC ENFORCEMENT GUIDANCE ON THE AMERICANS WITH DISABILITIES ACT AND PSYCHIATRIC DISABILITIES 2 (Mar. 25, 1997), <https://bit.ly/3kJeTEI>.

239. K. M. Thomas et al., *The Convergent Structure of DSM-5 Personality Trait Facets and Five-Factor Model Trait Domains*, 20 ASSESSMENT 308, 308–11 (2013), <https://bit.ly/2HriuZD>. *See generally* T.A. Widiger, *Integrating Normal and Abnormal Personality Structure: A Proposal for DSM-V*, 25 J. PERS. DISORDERS 338, 338–363 (2011).

240. *See* AM. PSYCHIATRIC ASS’N, *supra* note 232, at xliii, 645.

241. *See id.* at 761.

242. *Id.* at 773.

243. *See* Thomas & Scroggins, *supra* note 42.

includes in its diagnostic criteria for antisocial personality disorder.²⁴⁴ Over the past decade, researchers have developed and tested various Five Factor Model Personality Disorder inventories, with the expectation that the inventories will prove useful to clinicians in diagnosing and treating personality disorders.²⁴⁵

The fact that research has shown significant correlation between the Five Factor Model and personality disorders—enough that the DSM-5 includes analysis of pathological personality traits as a method of diagnosing those disorders—indicates that pre-employment personality tests based on the same five dimensions may disproportionately exclude applicants with some personality disorders. For example, if a pre-employment personality test seeks to weed out candidates who score high on Neuroticism,²⁴⁶ the test is likely to disproportionately exclude individuals with avoidant personality disorder, borderline personality disorder, and obsessive-compulsive personality disorder, all of which contain pathological traits related to Neuroticism.²⁴⁷ Similarly, the court in *Karraker* found that an individual with paranoid personality disorder was likely to register a high score on the MMPI's paranoia scale, such that the test “has the effect of hurting the employment prospects of one with a mental disability.”²⁴⁸ That discriminatory effect was not sufficient, however, for the court to find that the MMPI was a medical examination; the court also relied on the fact that the MMPI was designed to reveal mental illness.²⁴⁹ Because the Five Factor Model and most of the personality tests based on the model were not designed to reveal mental illness,²⁵⁰ these tests are not medical examinations under the ADA.²⁵¹

244. See AM. PSYCHIATRIC ASS'N, *supra* note 232, at 764.

245. See Bagby & Widiger, *supra* note 231, at 1, 5.

246. See Weber, *supra* note 42 (stating that a RadioShack Corp. test question asking to what extent the applicant agreed with the statement “[o]ver the course of the day, I can experience many mood changes” measured how neurotic the applicant was).

247. See AM. PSYCHIATRIC ASS'N, *supra* note 232, at 765–68. The DSM-5 uses the term Negative Affectivity rather than Neuroticism, and notes that its polar opposite is Emotional Stability. See *id.* at 779.

248. *Karraker v. Rent-A-Center, Inc.*, 411 F.3d 831, 837 (7th Cir. 2005).

249. *Id.*

250. The exception is the Five Factor Model Personality Disorder inventories, discussed in *supra* note 245 and accompanying text. See generally Bagby & Widiger, *supra* note 231. If an employer used a personality test based on a Five Factor Model Personality Disorder inventory, the situation would be analogous to that in *Karraker*, where the employer used a personality test based on an assessment developed for clinical use. It seems implausible, however, that an employer or personality-test vendor would decide to begin their test development with a Five Factor Obsessive-Compulsive Inventory, for example.

251. Not only were these pre-employment personality tests not designed to reveal an impairment, they are also unlikely to meet any of the EEOC's other six factors for medical examinations. See *EEOC Enforcement Guidance*, *supra* note 142. For example,

The focal article in the June 2019 issue of *Industrial and Organizational Psychology* contended that research regarding the relationship between normal personality and personality disorders—“blurring the line between normal/general personality and pathological, disordered personality”—makes it more likely that pre-employment personality testing conflicts with the ADA.²⁵² The article’s authors incorrectly posited, however, that “the correlation between the FFM and DSM-5 symptomology” may be enough to make a personality test a prohibited pre-employment medical exam.²⁵³ They failed to recognize that, as discussed above, FFM-based personality tests were not designed to reveal mental illness. Several of the commentaries responding to the focal article noted that error,²⁵⁴ and some of them identified that the greater ADA concern for personality tests was liability under the disparate impact theory.²⁵⁵

B. Disparate Impact on an Individual or Individuals with Disabilities

Even though the discriminatory effect on individuals with some personality disorders is not sufficient to make FFM-based personality tests medical examinations, these tests may nonetheless violate the Americans with Disabilities Act under the disparate impact theory.²⁵⁶ The ADA prohibits the use of employment tests that “screen out or tend to screen out an individual with a disability or a class of individuals with disabilities” unless the test is job-related and consistent with business

they do not involve the use of medical equipment, are not administered by a health care professional, and are not invasive. *See id.*

252. Arturia Melson-Silimon et al., *Personality Testing and the Americans with Disabilities Act: Cause for Concern as Normal and Abnormal Personality Models Are Integrated*, 12 *INDUS. & ORGANIZATIONAL PSYCHOL.* 119, 120 (2019).

253. *Id.* at 127.

254. *See, e.g.*, Stephan Dilchert et al., *Personality Assessment for Work: Legal, I-O, and Clinical Perspective*, 12 *INDUS. & ORGANIZATIONAL PSYCHOL.* 143, 144 (2019); Chase A. Winterberg et al., *A Clarification of ADA Jurisprudence for Personality-Based Selection*, 12 *INDUS. & ORGANIZATIONAL PSYCHOL.* 172, 174 (2019).

255. *See* Mahima Saxena & Scott B. Morris, *Adverse Impact as Disability Discrimination: Illustrating the Perils Through Self-Control at Work*, 12 *INDUS. & ORGANIZATIONAL PSYCHOL.* 138, 138 (2019); Christopher M. Castille et al., *Assessing Ideal Personalities at Work: Is It All Just a Little Bit of History Repeating?*, 12 *INDUS. & ORGANIZATIONAL PSYCHOL.* 133, 135 (2019). *But see* Dilchert et al., *supra* note 254, at 148 (asserting that “[j]ob-related, normal-range personality measures can be used without fear of violating the ADA”).

256. *See* 42 U.S.C. § 12112(b)(3) (2018) (stating that the term “discriminate against a qualified individual on the basis of disability” includes “utilizing standards, criteria, or methods of administration . . . that have the effect of discrimination on the basis of disability”); *see also* Winterberg et al., *supra* note 254, at 174 (noting that “empirical claims concerning clinical-normal personality correlations implicate consideration of disparate impact or unintentional discrimination”).

necessity.²⁵⁷ As mentioned above, a personality test that seeks to weed out applicants scoring highly on Neuroticism is likely to tend to screen out individuals with three different personality disorders. A personality test that seeks to weed out applicants scoring low on Extraversion (or, to focus on the opposite pole of the spectrum, those scoring high on Detachment) is likely to screen out individuals with avoidant personality disorder, obsessive-compulsive personality disorder, and schizotypal personality disorder.²⁵⁸

Moreover, FFM-based personality tests may screen out individuals with mental disabilities other than personality disorders. Studies have shown that high neuroticism and low conscientiousness scores are associated with anxiety disorders and depressive disorders.²⁵⁹ Individuals with bipolar disorder tend to have higher neuroticism and openness and lower extraversion, conscientiousness, and agreeableness scores than the general population.²⁶⁰ A recent meta-analysis of the literature on the relationship between autism spectrum disorder (ASD) and the Big Five personality traits concluded that “ASD is associated with lower

257. 42 U.S.C. § 12112(b)(6) (2018).

258. AM. PSYCHIATRIC ASS'N, *supra* note 232, at 765–70; *see also* Manuel F. Gonzalez et al., *Personality and the ADA: Ameliorating Fairness Concerns and Maintaining Utility*, 12 INDUS. & ORGANIZATIONAL PSYCHOL. 151, 154 (2019) (stating that a personality profile for a managerial position “may cause disparate impact against those with PDs [personality disorders] if the decision is based on low impulsiveness (a facet of neuroticism), high dutifulness (a facet of conscientiousness), and high trustworthiness (a facet of agreeableness), all of which are related to borderline personality disorder” (citing Douglas B. Samuel & Thomas A. Widiger, *A Meta-Analytic Review of the Relationships Between the Five-Factor Model and DSM-IV-TR Personality Disorders: A Facet Level Analysis*, 28 CLINICAL PSYCHOL. REV. 1326 (2008))).

259. *See* Oscar J. Bienvenu et al., *Anxiety and Depressive Disorders and the Five-Factor Model of Personality: A Higher- and Lower-Order Personality Trait Investigation in a Community Sample*, 20 DEPRESSION & ANXIETY 92, 94 (2004); Roman Kotov et al., *Linking “Big” Personality Traits to Anxiety, Depressive, and Substance Use Disorders: A Meta-Analysis*, 136 PSYCHOL. BULLETIN 768, 805 (2010); Fatemeh Nouri et al., *How Five-Factor Personality Traits Affect Psychological Distress and Depression? Results from a Large Population-Based Study*, 64 PSYCHOL. STUD. 59, 63 (2019); *see also* Matthew J. Taylor et al., *Assessment Trepidation for FFM Personality Tests: Much “ADA” About Nothing?*, 12 INDUS. & ORGANIZATIONAL PSYCHOL. 195, 197 (2019) (noting that despite the prevalence of anxiety and depression in the population, “[f]ew ADA challenges have been brought concerning personality models’ correlations with anxiety and depression”).

260. *See* J.H. Barnett et al., *Personality and Bipolar Disorder: Dissecting State and Trait Associations Between Mood and Personality*, 41 PSYCHOL. MED. 1593, 1599 (2011); Pekka Jylha et al., *Differences in Neuroticism and Extraversion Between Patients with Bipolar I or II and General Population or Subjects or Major Depressive Disorder Patients*, 125 J. AFFECTIVE DISORDERS 42, 49 (2010); Timea Sparding et al., *Personality Traits in Bipolar Disorder and Influence on Outcome*, 17 BMC PSYCHIATRY 159, 163 (2017).

openness, conscientiousness, extraversion, agreeableness, and emotional stability.”²⁶¹

Evaluating a pre-employment personality test under the disparate impact theory is a more nuanced inquiry than whether the test constitutes a medical examination. If a personality test is deemed a medical examination, employers cannot use it in the job-application process.²⁶² It does not matter if the test precisely tracks the traits a worker needs to succeed on the job or the tasks the worker would do on the job, such that it would be impossible for an applicant to fail the test and nonetheless perform the job safely and effectively. The employer must extend a conditional offer of employment before requiring such a test.²⁶³ Moreover, anyone who is subjected to a pre-employment medical examination has standing to sue the employer; he or she need not be a qualified individual with a disability.²⁶⁴

In contrast, even if an applicant with a disability can demonstrate that a pre-employment personality test tends to screen him or her out, the employer’s use of the test complies with the ADA if the test is job-related and consistent with business necessity. Before examining the employer’s affirmative defense, however, how would an applicant with a disability demonstrate that a particular test has a disparate impact on him or her because of disability?

1. Statistical Evidence of Group Impact Is Not Required

In the Title VII context, plaintiffs generally prove that a test has a disparate impact via statistical evidence showing that the test excluded a disproportionate number of persons in a protected group.²⁶⁵ The EEOC’s Uniform Guidelines on Employee Selection Procedures provide that a selection rate for any protected group that is less than four-fifths of the rate for the group with the highest rate generally constitutes evidence of

261. Jennifer Lodi-Smith et al., *Meta-Analysis of Big Five Personality Traits in Autism Spectrum Disorder*, 23 *AUTISM* 556, 560 (2019). The authors note, however, that “not all individuals with ASD exhibit a low Big Five trait profile,” indicating that “low Big Five traits and ASD are not equivalent.” *Id.*

262. § 12112(d)(2)(B).

263. *See id.* § 12112(d)(3).

264. *See supra* note 145 and accompanying text.

265. *See Watson v. Fort Worth Bank & Tr.*, 487 U.S. 977, 987 (1988) (stating that the evidence in disparate impact cases “usually focuses on statistical disparities”); *Robinson v. Metro-N. Commuter R.R.*, 267 F.3d 147, 160 (2d Cir. 2001) (stating that “statistical proof almost always occupies center stage in a prima facie showing of a disparate impact claim”); *Evers v. Alliant Techsystems, Inc.*, 241 F.3d 948, 953 (8th Cir. 2001) (stating that a plaintiff must present “statistical evidence of a kind and degree sufficient to show that the practice in question caused the plaintiff to suffer adverse employment action because of his or her membership in a protected group”).

disparate impact.²⁶⁶ ADA plaintiffs, however, rarely have such statistical evidence. Unlike Title VII, which requires employers to keep records disclosing the impact of their tests on the employment opportunities of individuals by race, sex, and ethnic group,²⁶⁷ the ADA expressly prohibits employers from asking about an applicant's disability status.²⁶⁸ If employers are not allowed to ask applicants about their disability status, how could an ADA plaintiff possibly obtain statistical evidence demonstrating that a particular personality test used by an employer disproportionately excluded individuals with certain mental disabilities?

The answer is that, under the express terms of the statute, ADA plaintiffs need not make such a statistical showing. An ADA plaintiff may prove a disparate impact by demonstrating that an employer's policy "screen[s] out or tend[s] to screen out an individual with a disability or a class of individuals with disabilities."²⁶⁹ The ADA authorizes individually-focused disparate impact claims, wherein a plaintiff may demonstrate disparate impact by showing that the challenged test adversely affected her because of her disability, without proving an adverse effect on a class of persons with disabilities.²⁷⁰ In its Technical Assistance Manual to Title I of the ADA, the EEOC explains the rationale for allowing such claims:

Disabilities vary so much that it is difficult, if not impossible, to make general determinations about the effect of various standards, criteria, and procedures on "people with disabilities." Often, there may be little or no statistical data to measure the impact of a procedure on any "class" of people with a particular disability compared to people without disabilities. As with other determinations under the ADA, the exclusionary effect of a selection procedure usually must be looked at in relation to a particular individual who has particular limitations caused by a disability.²⁷¹

Several federal courts have recognized that statistics or other class-based proof are not necessary to make an ADA disparate impact claim. In *Gonzales v. City of New Braunfels, Tex.*, the Fifth Circuit stated that

266. See 29 C.F.R. § 1607.4(D) (2020).

267. See *id.* § 1607.4(A).

268. See § 12112(d)(2)(B).

269. See *id.* § 12112(b)(6).

270. See Kelly Cahill Timmons, *Accommodating Misconduct Under the Americans with Disabilities Act*, 57 FLA. L. REV. 187, 202 (2005); see also EQUAL EMP'T OPPORTUNITY COMM'N, A TECHNICAL ASSISTANCE MANUAL ON THE EMPLOYMENT PROVISIONS (TITLE I) OF THE AMERICANS WITH DISABILITIES ACT § I-4.3 (1992), <https://bit.ly/2ZbsY5s> ("It is not necessary to make statistical comparisons between a group of people with disabilities and people who are not disabled to show that a person with a disability is screened out by a selection standard.").

271. EQUAL EMP'T OPPORTUNITY COMM'N, *supra* note 270, § I-4.3.

an ADA plaintiff can assert a disparate impact claim by showing that the challenged practice has “an adverse impact on himself, rather than on an entire group.”²⁷² This statement was dictum, however, as the court concluded that the plaintiff had waived any disparate impact claim.²⁷³ In *Rohr v. Salt River Project Agricultural Improvement & Power Dist.*, the Ninth Circuit stated, “Once an employee shows that a qualification standard tends to screen out *an individual* with a disability, the employer bears the burden of proving that the challenged standard is job-related and consistent with business necessity.”²⁷⁴ The employer in *Rohr* did not contest that the qualification standard at issue—a respirator certification test—screened out the plaintiff because of his high blood pressure, a complication of his diabetes.²⁷⁵ Accordingly, the court did not explicitly reject the argument that an ADA plaintiff must show a disparate impact on a group rather than just on the plaintiff himself.

The best judicial analysis of the proof required in an ADA disparate impact case is in *Williams v. ABM Parking Services, Inc.*,²⁷⁶ a district court opinion from Virginia. The plaintiff in *Williams* was an experienced shuttle bus supervisor who, after suffering two strokes, could no longer obtain a Commercial Driver’s License (“CDL”) or a Department of Transportation card (“DOT card”) certifying his clearance to drive a shuttle bus.²⁷⁷ Following a company reorganization, he re-applied for a shuttle bus supervisor position, but the defendants rejected him, stating that he was ineligible because he did not hold a CDL or DOT card.²⁷⁸ The plaintiff claimed that the CDL and DOT card requirements were qualification standards that screened him out because of his disability.²⁷⁹ The defendants argued that the plaintiff needed to show statistical evidence that the CDL and DOT card requirements discriminated against a class of individuals with disabilities,²⁸⁰ but the court rejected that argument as “misunderstand[ing] that a disparate claim under the ADA differs from a disparate impact claim under other

272. See *Gonzales v. City of New Braunfels*, 176 F.3d 834, 839 n.26 (5th Cir. 1999).

273. *Id.* at 839 (stating that “nowhere in any of the pretrial, summary judgment, or appellate pleadings or proceedings has Gonzales contended that this particular requirement”—that evidence technicians be commissioned police officers—“had an adverse impact [on] him”).

274. *Rohr v. Salt River Project Agric. Improvement & Power Dist.*, 555 F.3d 850, 862 (9th Cir. 2009) (emphasis added).

275. See *id.*

276. *Williams v. ABM Parking Servs.*, 296 F. Supp. 3d 779 (E.D. Va. 2017).

277. See *id.* at 782–83.

278. See *id.* at 783.

279. See *id.* at 788–89.

280. See *id.* at 788.

federal statutes, such as Title VII.”²⁸¹ The court noted that the express language of § 12112(b)(6) provides a screen out disparate impact theory that applies to individuals, making statistical evidence unnecessary and Title VII precedents inapposite.²⁸² Accordingly, the court held that statistical evidence was not necessary to support the plaintiff’s disparate impact claim.²⁸³

Some courts have held that ADA disparate impact claims do require statistical evidence of adverse impact on a group of individuals with disabilities, but those courts cite Title VII cases and fail to address the ADA’s distinct “screen out” language. In *Roberts v. City of Chicago*, for example, the court stated that the plaintiffs’ disparate impact claim based on the city’s medical screening process for firefighters failed because it did not show a “relevant and statistically significant disparity between’ disabled and nondisabled applicants.”²⁸⁴ In support of this need for statistical evidence, however, the court cited only a Title VII disparate impact case involving firefighters.²⁸⁵ Similarly, in *Kintz v. United Parcel Service, Inc.*, a case in which the plaintiff contended that her employer’s dress code policy had a disparate impact based on disability, the court

281. *Id.* at 789.

282. *See id.* at 789–90. The defendants cited two cases—*EEOC v. Freeman*, 961 F. Supp. 2d 783 (D. Md. 2013), and *Anderson v. Westinghouse*, 406 F.3d 248 (4th Cir. 2005)—for the proposition that disparate impact claims require statistical evidence, but the court explained that both involved Title VII claims and thus were irrelevant in an ADA case. *See Williams*, 296 F. Supp. 3d at 789.

283. *See Williams*, 296 F. Supp. 3d at 790. In *Sturgill v. Norfolk Southern Railway Co.*, 391 F. Supp. 3d 598, 609 (E.D. Va. 2019), the court cited *Williams* for the proposition that an ADA plaintiff can assert an individually focused disparate impact claim based on qualification standards that tend to screen out an individual with a disability. Nonetheless, the court rejected the plaintiff’s disparate impact claim. *See id.* The plaintiff, whose job offer was revoked because of his high body mass index (BMI), did not allege facts indicating how the defendant’s BMI policy related to the essential functions of the job; nor did he plead that an exception to the policy would be a reasonable accommodation. *See id.* The court granted the defendant’s motion to dismiss the disparate impact claim, concluding that the plaintiff “ha[d] not pled a disparate-impact claim under a qualification standard theory.” *Id.* at 610.

284. *Roberts v. City of Chi.* 817 F.3d 561, 566 (7th Cir. 2016) (quoting *Adams v. City of Indianapolis*, 742 F.3d 720, 733 (7th Cir. 2014), *cert. denied*, 135 S. Ct. 286 (2014)). The court also noted that the “complaint alleges that the City discriminated against [the two plaintiffs], not disabled applicants generally.” *Id.*

285. *See id.* (citing *Adams*, 742 F.3d at 733). The particular language from *Adams* quoted by the court in *Roberts* is taken from the following sentence: “In a complex disparate-impact case like this one, we would expect to see some factual content in the complaint tending to show that the City’s testing process, or some particular part of it, caused a relevant and statistically significant disparity between black and white applicants for promotion.” *Adams*, 742 F.3d at 733. *See generally* Forsyth v. Univ. of Ala. Bd. of Trs., No.: 7-17-cv-00854-RDP, 2018 WL 4517592 (N.D. Ala. 2018) (citing two Title VII cases in support of the proposition that “in the Eleventh Circuit, statistical evidence showing the discriminatory result of the challenged employment practice would be necessary to prevail on a disparate impact claim”).

held that she “must demonstrate causation by offering statistical evidence sufficient to show that the challenged practice has resulted in prohibited discrimination.”²⁸⁶ The court cited a Title VII case and a Fair Housing Act case in support of this proposition, despite the ADA’s different “screen out” language.²⁸⁷

Much of this confusion is likely due to plaintiffs’ counsel failing to focus on the ADA’s language and instead making disparate impact arguments based on Title VII cases and reasoning.²⁸⁸ In *Lopez v. Pacific Maritime Ass’n*, for example, the plaintiff claimed that the defendant’s “one-strike rule”—eliminating from hiring consideration any applicant who previously failed a pre-employment drug screening—had a disparate impact on recovering drug addicts.²⁸⁹ Throughout the litigation, the plaintiff had cited Title VII cases in support of his disparate impact claim, indicating that he intended to use that method of proving disparate impact.²⁹⁰ The court rejected the claim because the plaintiff presented no statistical evidence demonstrating that the one-strike rule resulted in fewer recovered drug addicts employed by the defendant.²⁹¹ The plaintiff

286. *Kintz v. United Parcel Serv., Inc.*, 766 F. Supp. 2d 1245, 1254 (M.D. Ala. 2011).

287. *See id.* at 1254 (citing *Spivey v. Beverly Enters., Inc.*, 196 F.3d 1309, 1314 (11th Cir. 1999) (Title VII case based on the Pregnancy Discrimination Act), and *Hallmark Developers v. Fulton Cty.*, 466 F.3d 1276, 1286 (11th Cir. 2006) (Fair Housing Act case)). A disparate impact claim under the Fair Housing Act, like such a claim under Title VII, requires group-based proof. *See Hallmark Developers*, 466 F.3d at 1286 (stating that a plaintiff can demonstrate a discriminatory effect under the Fair Housing Act by showing that the challenged decision either has a segregative effect or makes housing options significantly more restrictive for members of a protected group than for those outside that group). Along the same lines, the court in *Smith v. Miami-Dade County* held that an ADA plaintiff must show statistical evidence indicating a disparate impact. *See Smith v. Miami-Dade Cty.*, 21 F. Supp. 3d 1292, 1295 (S.D. Fla. 2014), *aff’d* 621 Fed. Appx. 955 (11th Cir. 2015). To support that proposition, the court cited the *Spivey* Title VII case cited in *Kintz*, another Title VII case, *Armstrong v. Flowers Hosp., Inc.*, 33 F.3d 1308, 1315 (11th Cir. 1994), and a Fair Housing Act case, *Schwarz v. City of Treasure Island*, 544 F.3d 1201, 1217 (11th Cir. 2008). *See Smith*, 21 F. Supp. 3d at 1295.

288. *See* Amanda Johnson, Note, *Challenging Criminal Records in Hiring Under the Americans with Disabilities Act*, 48 COLUM. HUM. RTS. L. REV. 211, 238 (2017) (noting that “[t]he rare ADA disparate impact case is . . . often analyzed under the Title VII *Griggs* framework—in part because plaintiffs often frame their claims that way”).

289. *See Lopez v. Pac. Mar. Ass’n*, 657 F.3d 762, 766 (9th Cir. 2011).

290. *See id.* The court “observe[d] that Plaintiff has litigated his disparate impact claim from start to finish on the familiar theory taken from discrimination claims brought under Title VII,” which led both the district and appellate courts to conclude “that Plaintiff intended to prove his disparate impact claim through the usual method of proving ‘disparate impact’ as set out in Title VII cases.” *Id.*

291. *See id.* at 767. The court stated, “[t]o create a genuine issue of fact under the theory that Plaintiff chose to pursue, Plaintiff must have produced evidence from which a fact-finder reasonably could conclude that the one-strike rule results in fewer recovered drug addicts in Defendant’s employ, as compared to the number of qualified drug addicts in the relevant labor market.” *Id.*

did not contend that no statistical showing of impact was necessary or otherwise focus on the ADA's "screen out" language until his petition for rehearing before the Ninth Circuit, and accordingly, the court held that he waived that theory.²⁹²

The reported case most factually analogous to an ADA disparate impact challenge to a pre-employment personality test is *Leskovisek v. Illinois Department of Transportation*.²⁹³ The plaintiffs in *Leskovisek* were two men with autism, one of whom was unable to use speech to communicate and the other whose ability to communicate and interact with others was impaired.²⁹⁴ They entered the Illinois Department of Transportation's (IDOT) Students with Disabilities Program as tech trainees and were assigned to work in the Statistical Coding Unit of the Traffic Safety Division.²⁹⁵ The plaintiffs successfully performed the essential functions of their data-entry positions, were consistently top performers in the Unit, and eventually sought full-time, competitive employment with IDOT.²⁹⁶ Through its Department of Central Management Services (CMS), the State of Illinois has a structured application process for most State positions, which requires applicants to take a test and—if their grades on the test are sufficiently high—to undergo a structured interview.²⁹⁷ The plaintiffs contended that, due to their disabilities, they could not pass the test or the interview.²⁹⁸ Given that they had already demonstrated their ability to perform the job, the plaintiffs requested a waiver of the testing and interviewing requirements as a reasonable accommodation.²⁹⁹ CMS never granted nor denied the requested accommodation, such that plaintiffs were unable to apply for full-time, competitive employment.³⁰⁰ IDOT subsequently ended its

292. *See id.* at 767–68. Similarly, in *Roberts*, the plaintiffs did not even mention disparate impact in their complaint, so it is unsurprising that they failed to draw the court's attention to the difference between proving disparate impact under the ADA and proving it under Title VII. *See Roberts v. City of Chi.* 817 F.3d 561, 566 (7th Cir. 2016).

293. *See Leskovisek v. Ill. Dep't of Transp.*, 305 F. Supp. 3d 925 (C.D. Ill. 2018).

294. *See id.* at 930.

295. *See id.* The program "was intended to provide job training and employment experience to individuals with disabilities, with the goal of enabling them to obtain permanent, competitive employment." *Id.*

296. *See id.* As participants in the Students with Disabilities program rather than regular employees, the plaintiffs earned less than their coworkers and received no employment benefits. *See id.*

297. *See id.*

298. *See id.*

299. *See id.* Trade union bidding rights were another potential obstacle to the plaintiffs' obtaining full-time, competitive employment with the State of Illinois, but the plaintiffs' attorney negotiated a solution to that barrier. *See id.*

300. *Id.* at 931. Through its Chief Counsel, IDOT indicated that it "does not object to a waiver of the testing and interviewing requirements but, because CMS administers this process, CMS, not IDOT, must grant the accommodation request." *Id.* at 930.

participation in the Students with Disabilities Program, and the plaintiffs lost their positions as tech trainees.³⁰¹

In their lawsuit against IDOT and CMS, the *Leskovisek* plaintiffs contended that the defendants violated the ADA by using qualification standards that screen out individuals with disabilities and by failing to make a reasonable accommodation to the State's pre-employment testing and interviewing requirements.³⁰² Citing *Roberts v. City of Chicago*, the defendants argued that the plaintiffs' disparate impact claim failed due to the absence of "facts showing that the testing process caused a relevant and statistically significant disparity between disabled and non-disabled applicants."³⁰³ While acknowledging that it was bound by *Roberts*, the court allowed the claim to proceed into the discovery phase, noting that the ADA "specifically defines discrimination to include qualifications [sic] standards that screen out an individual with a disability, not just a class of individuals with a disability."³⁰⁴ The court also rejected the defendants' contention that a complete waiver of the testing and interview process could not be an appropriate accommodation.³⁰⁵

The facts in *Leskovisek* are a compelling example of the need for the Americans with Disabilities Act and its prohibition of qualification standards that screen out individuals with disabilities. Through IDOT's Students with Disabilities Program, the plaintiffs were able to demonstrate that they could successfully perform data-entry jobs for IDOT. Yet when they sought full-time competitive employment with IDOT, they were immediately excluded from consideration because—due to limitations caused by their autism—they could not pass the State's test and interview requirements. Although those requirements, known as the *Rutan* process, were intended to ensure fairness in hiring,³⁰⁶ they were unfair as applied to the plaintiffs.

If statistical evidence is not required, how else might an applicant with a disability demonstrate that a particular personality test has a disparate impact on him or her because of disability? Because the personality test must "tend to screen out an individual with a disability . . . on the basis of disability,"³⁰⁷ the applicant must prove that the test

301. *Id.* at 931.

302. *See Leskovisek*, 305 F. Supp. 3d at 934, 935.

303. *Id.* at 936.

304. *Id.*

305. *See id.* at 935. The court explained that the defendants could not reject the plaintiffs' accommodation requests without explaining the reason for the rejection or suggesting alternatives. *See id.*

306. *Id.* at 930 (citing *Rutan v. Republican Party of Ill.*, 497 U.S. 62, 79 (1990) (holding that hiring, promotion, transfer, and recall may not be based on party affiliation or support but must be based on the merits and qualifications of candidates)).

307. 29 C.F.R. § 1630.10(a) (2020).

has an “exclusionary effect” on him or her due to the “particular limitations caused by [the applicant’s] disability.”³⁰⁸ This is a question of causation; there must be a nexus between the applicant’s disability and their low score on the personality test.³⁰⁹ The research indicating significant correlation between the Five Factor Model and mental disabilities such as personality disorders, anxiety disorders, and depressive disorders indicates that personality tests based on the FFM may screen out individuals with such disabilities.³¹⁰ To provide a specific example, if a personality test seeks to eliminate candidates with high neuroticism and openness and low extraversion, conscientiousness, and agreeableness scores, given the correlation between such scores and bipolar disorder, an applicant with bipolar disorder should be able to show that the test tends to screen him or her out based on disability.³¹¹

It is likely, however, that employers and vendors will resist revealing the traits their personality tests seek to include or exclude, claiming intellectual property protections and/or the need to prevent

308. *See id.* § I-4.3(2). This showing is similar to what is required to make a failure to accommodate claim under the ADA, that the employer did not “mak[e] reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability.” 42 U.S.C. § 12112(b)(5)(A) (2018). Scholars have noted the similarities between the concepts of disparate impact discrimination and accommodation. *See generally* Christine Jolls, *Antidiscrimination and Accommodation*, 115 HARV. L. REV. 642 (2001); Timmons, *supra* note 270.

309. *See* Equal Employment Opportunity for Individuals With Disabilities, 56 Fed. Reg. 35,731 (July 26, 1991) (explaining that for a selection criterion to be challenged under the ADA, “there must be a nexus between the exclusion and the disability,” and stating that “[a] selection criterion that screens out an individual with a disability for reasons that are not related to the disability does not violate” the statute); *see also* *Vale v. City of Chi.*, 982 F. Supp. 560, 566 (N.D. Ill. 1997) (finding that former probationary police officer’s claim that his muscle-tissue disorder prevented him from successfully completing police department’s running test was sufficient to indicate that the test was a selection criteria that tended to screen him out based on his disability and to shift to the department the burden of proving that the test was job-related and consistent with business necessity).

310. Similarly, Amanda Johnson has argued that an employer policy barring applicants with criminal records may violate the ADA because of its disparate impact on those recovering from drug addiction. *See* Johnson, *supra* note 288 at 213. According to Johnson, “[t]o show that a criminal records policy screens out candidates ‘because of disability,’ a plaintiff would need to show a nexus between her criminal history (which caused her to be rejected) and her past drug addiction.” *Id.* at 246. She notes that “there is a correlation between addiction and criminal behavior, as well as involvement in the criminal justice system” and that “[i]llegal drugs played role in landing three-quarters of inmates behind bars.” *Id.* at 247; *see also* Timmons, *supra* note 270, at 253, 259 (asserting that a workplace-conduct rule may have a disparate impact on an employee with a disability if the particular limitations caused by the disability substantially affected the employee’s ability to comply with the rule).

311. *See* Sparding et al., *supra* note 260, at 6. Similarly, a personality test seeking to eliminate candidates with high neuroticism and low openness, conscientiousness, extraversion, and agreeableness scores would tend to screen out applicants with autism spectrum disorder. *See* Lodi-Smith et al., *supra* note 261, at 560.

applicants from cheating on the test.³¹² If the test is based at least in part on the Five Factor Model, and if the applicant has a mental disability that research reveals to be correlated with one or more of the five factors, courts should find that the test has a disparate impact on the applicant based on disability.³¹³ This finding triggers the employer's obligation to demonstrate that the test is job-related for the position in question and consistent with business necessity.³¹⁴ The EEOC has explained the ADA's qualification standards provision as "designed to assure that people with disabilities are not excluded from jobs that they can perform."³¹⁵ For that goal to be achieved, courts cannot allow employers to use personality tests that may screen out individuals based on disability—while refusing to reveal the science underlying the tests or any other evidence indicating the effect of the test on applicants with disabilities—without demonstrating a strong connection between the test and job performance.

2. Statistics Could Be Enlightening, and Vendors Should Try to Obtain Them

More research should be conducted on the relationship between mental disabilities and pre-employment personality tests. Psychologists have conducted numerous research studies demonstrating correlations between the Five Factor Model traits and mental impairments, and personality test vendors tout the extensive research underlying their tests and connecting them with successful job performance. What is missing is research bridging the two areas—research into whether individuals with mental disabilities are disproportionately screened out by FFM-based pre-employment personality tests³¹⁶ and if so, whether poor performance on the test indicates inability to perform the job in question.

Employers cannot conduct this research themselves, as the ADA bars them from asking about disability prior to extending a job offer. Test vendors, however, are free to make such inquiries outside the context of a particular employer's hiring decision. Vendors proclaim that their tests allow employers to find the ideal candidate for every job, while improving diversity. *Aspiring Minds* asserts that more than five million individuals have taken their personality tests; Hogan

312. See *supra* Section III.C.3.

313. See Johnson, *supra* note 288, at 247–48 (asserting that “[w]hen the very symptoms of a disease are factors that a selection procedure uses to screen candidates, that policy adversely impacts that group on the basis of their disability”).

314. See 42 U.S.C. § 12112(b)(6) (2018).

315. EQUAL EMP'T OPPORTUNITY COMM'N, *supra* note 270, § I-4.1.

316. See Castille et al., *supra* note 255, at 135 (noting that “it remains to be demonstrated empirically whether ideal point personality assessments actually cause adverse impact in *practice*” and that “research is sorely needed in this area”).

Assessments claims that more than three million individuals have taken the HPI; Fit First Technologies states that more than two million individuals have taken TalentSorter. Personality testing is the business of these companies, and they should have an answer as to whether people with certain mental disabilities tend to be screened out by their tests. As recognized by the court in *Kronos*, pre-employment personality tests violate the ADA when they tend to screen out individuals with disabilities and are not job-related and consistent with business necessity, making the types of characteristics screened out by the tests legally relevant.³¹⁷

Obtaining statistical information may be challenging, in part because, as noted by the EEOC, “[d]isabilities vary so much that it is difficult, if not impossible, to make general determinations about the effect of various standards, criteria, and procedures on ‘people with disabilities.’”³¹⁸ Moreover, the social model of disability defines disability as “the product of disabling environments and attitudes, not aberrations located in individual bodies” and minds.³¹⁹ The participants in the “Disability, Bias, and AI” workshop conducted by the AI Now Institute at New York University in 2019 cautioned that this understanding of disability as context-dependent “complicates dominant approaches to ‘solving’ AI bias. Such technical approaches tend to classify people by a single (usually demographic) variable, such as race or gender, and then apply a variety of methods to test or modify a given AI system to ensure that it functions similarly across all ‘types’ of people.”³²⁰

Nonetheless, vendors should attempt to obtain information on the disability-status of individuals taking their tests. Before the author took the Jobtimize Fit Assessment, there was a demographics pop-up question asking for her gender, age, and ethnicity and explaining:

The information on this pop-up is optional and will be used by TalentSorter (only), specifically for the purpose of our research. Optional personal information is requested to ensure that the

317. See *E.E.O.C. v. Kronos Inc.*, 694 F.3d 351, 357, 364 (3d Cir. 2012).

318. See EQUAL EMP’T OPPORTUNITY COMM’N, *supra* note 270, § I-4.3; see also Rachel Adams et al., *Disability*, in KEYWORDS FOR DISABILITY STUDIES 5 (NYU Press 2015) (stating that “[d]isability encompasses a broad range of bodily, cognitive, and sensory differences and capacities”).

319. Meredith Whittaker, *AI Now Institute at NYU*, in DISABILITY, BIAS, AND AI 4 (Nov. 2019), <https://bit.ly/3l0LOF5>; see also Timmons, *supra* note 270, at 248–49. The ADA reflects the social model of disability as opposed to the earlier medical model of disability, which focused on curing the disabled individual. *Id.*; Wendy F. Hensel, *Interacting with Others: A Major Life Activity Under the Americans with Disabilities Act?*, 2002 WIS. L. REV. 1139, 1144–45.

320. Whittaker, *supra* note 319, at 11.

questions in the assessment are not influenced by the gender, age or ethnicity of the person being assessed. We appreciate your help. Your information is tracked only for statistical analysis to measure the impartiality of the questions and is not shared with any employers or outside parties other than our Development partners.

Such a question could be revised to include a list of mental disabilities and to ask whether the individual has one or more of them, and if so, which ones. Admittedly, test takers may be reluctant to answer the disability question honestly, fearing that the information will not remain confidential and could be stigmatizing.³²¹ Moreover, the number of test takers with a particular mental disability may be so small as to make any apparent correlations between the disorder and a sought-for personality trait not statistically significant.

If statistics may be hard to obtain and the numbers may be quite small, why should vendors investigate the relationship between pre-employment personality tests and mental disabilities? Kyle Behm's situation provides a compelling answer. He was a smart, hardworking young man with bipolar disorder looking for a minimum-wage job while attending college, and seven companies rejected him due to his performance on their pre-employment personality test. According to one of the companies, PetSmart, the test vendor Kronos calibrated their test such that 25% of test takers received a Red score indicating "do not hire." Given the correlations between bipolar disorder and the Five Factor Model traits—the same traits underlying most personality tests—it seems likely that Kyle's bipolar disorder affected his performance on the tests.³²² PetSmart stated that it had "seen no evidence that qualified individuals with disabilities perform differently than others on the Kronos assessments," but we know from the *EEOC v. Kronos* litigation

321. A participant in the AI Now Institute's 2019 workshop on Disability, Bias, and AI "recounted being barred from purchasing a life insurance policy because their anxiety disorder made them ineligible." *Id.* at 20.

322. Relatedly, several individuals posting on a message board on the website Wrong Planet, a "web community designed for autistic individuals," contended that those on the autism spectrum tend to be disproportionately screened out by the Unicru test: "The Unicru Test is specifically designed to weed out people like us. Our 'remarkable honesty,' an Aspergian character trait, guarantees a failing score on the test"; "I usually have a 1% chance of being called after taking a [U]nicru test, which is probably why I don't have a job now. . . . Suck [sic] that these tests tend to weed out people with some disabilities; that's a lot of loyal honest hard-workers lost"; "The only way for anyone, especially an Aspergian, to pass the Unicru test is to cheat on the test"; "Every time I take one of these I get overwhelmingly discouraged about my job prospects." See leeloodallas, Comment to *Unicru*, WRONG PLANET (Oct. 12, 2010, 11:39 PM), <https://bit.ly/3kKYmjy>; RoadWarrior7, Comment to *Unicru*, WRONG PLANET (Oct. 9, 2010, 2:50 PM) <https://bit.ly/3kKYmjy>; RoadWarrior7, Comment to *Unicru*, WRONG PLANET (Oct. 8, 2010, 11:36 PM), <https://bit.ly/3kKYmjy>; spacemoney, Comment to *Unicru*, WRONG PLANET (Jan 27, 2009, 11:53 PM), <https://bit.ly/3kKYmjy>.

that Kronos never performed adverse-impact analysis with respect to disability.³²³ Employers like PetSmart should want to know if the pre-employment personality tests they use tend to screen out individuals with disabilities, so they should demand that test vendors attempt to obtain this information.³²⁴ Test vendors, moreover, would be better equipped to market their products if they could assure employers that they have investigated the products' impact on individuals with disabilities.

Are we confident that Kyle's low score on the personality test meant that he could not successfully perform the duties of the positions he sought at PetSmart or the other companies? Or is a primary benefit of the test the fact that it gives employers a quick and easy way to narrow the volume of applications they must consider?³²⁵ PetSmart claimed that the test helped them "identify applicants who were more likely to demonstrate successful on-the-job behaviors and to remain in their jobs for a longer period of time." It is far from certain, however, that such evidence would satisfy the employer's "job-related and consistent with business necessity" defense.

C. *Job-Related and Consistent with Business Necessity*

Employers may use personality tests that tend to screen out an individual or individuals with disabilities if they can prove that the tests are job-related and consistent with business necessity.³²⁶ Psychological research indicates, however, that personality tests have "very low validity for predicting overall job performance"³²⁷ and "are difficult to justify as a basis for making high-stakes decisions about individuals."³²⁸

Psychologists agree that the most valid predictor of job performance is cognitive ability—ability related to one's thinking, perceiving,

323. Brief of Kronos Incorporated as Appellee, E.E.O.C. v. Kronos Inc., No. 11-2834, 2012 WL 371622, at *9 (3d Cir. Jan. 23, 2012). The ADA, of course, prohibited PetSmart from obtaining this information directly themselves.

324. It is worth considering the effect on an individual with a disability to be repeatedly told that his personality traits render him unqualified for entry-level, low wage jobs. Kyle asked his father, "If I can't get a part-time minimum-wage job, how broken am I?" O'NEIL, *supra* note 115, at 108.

325. *See id.*

326. *See* 42 U.S.C. § 12112(b)(6) (2018).

327. Frederick P. Morgeson et al., *Reconsidering the Use of Personality Tests in Personnel Selection Contexts*, 60 PERSONNEL PSYCHOL. 683, 720 (2007) (five former journal editors from *Personnel Psychology* and the *Journal of Applied Psychology*, who had collectively viewed more than 7,000 manuscripts, assessed the state of the research on personality testing and job-performance prediction).

328. Frederick P. Morgeson et al., *Are We Getting Fooled Again? Coming to Terms with Limitations in the Use of Personality Tests for Personnel Selection*, 60 PERSONNEL PSYCHOL. 1029, 1032 (2007). *See also* Saxena & Morris, *supra* note 255, at 140 (noting that "establishing evidence of job relatedness is . . . likely to be challenging for traits more closely related to psychiatric disorders").

reasoning, verbal, and mathematical skills.³²⁹ Cognitive-ability tests, however, often have an adverse impact based on race and national origin.³³⁰ Out of the traits in the Five Factor Model, Conscientiousness is the most predictive of job performance, but its predictive value is low to moderate,³³¹ far less than that of cognitive ability.³³² Emotional Stability, the opposite pole of Narcissism, has a small but consistent correlation with job performance, particularly for customer service and sales jobs.³³³ The other three traits correlate slightly with performance in particular job categories: Agreeableness with jobs requiring interpersonal interaction, Extraversion with sales jobs, and Openness to Experience with customer-service jobs.³³⁴ Reliance on slight correlations between traits and job performance seems unlikely to satisfy the ADA's requirement of "job-related and consistent with business necessity."³³⁵

329. See Denis Ones et al., *In Support of Personality Assessment in Organizational Settings*, 60 PERSONNEL PSYCHOL. 995, 1006 (2007) (noting that the cognitive ability literature indicates that "regardless of the occupation or job under consideration, ability tests predict overall job performance" and "there appears to be little predictive gain from specific abilities beyond general cognitive ability"); Thomas & Scroggins, *supra* note 42, at 31–32; see also Frank L. Schmidt & John E. Hunter, *The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 Years of Research Findings*, 124 PSYCHOL. BULL. 262, 264–66 (1998).

330. See Thomas & Scroggins, *supra* note 42, at 32.

331. See Gregory M. Hurtz & John J. Donovan, *Personality and Job Performance: The Big Five Revisited*, 85 J. APPLIED PSYCHOL. 869, 876 (2000); Ones et al., *supra* note 329, at 1002 (stating that "evidence suggests that Conscientiousness is the single best, generalizable Big Five Predictor of job performance"); see also Frank L. Schmidt et al., *The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 100 Years of Research Findings* 41 (working paper) (Nov. 2016), <https://bit.ly/33SQmGg> (citing research indicating that "controlling for mental ability, employees who are higher in conscientiousness develop higher levels of job knowledge, probably because highly conscientious individuals exert greater efforts and spend more time 'on task'" and that such job knowledge "causes higher levels of job performance").

332. See Schmidt et al., *supra* note 331, at 65 (noting that Conscientiousness has an "operational validity" of .22, compared to .65 for cognitive ability tests and .58 for employment interviews).

333. See Hurtz & Donovan, *supra* note 331, at 876. *But see* Schmidt et al., *supra* note 331, at 65 (listing the "operational validity" of Emotional Stability as a job performance predictor as .12).

334. See Hurtz & Donovan, *supra* note 331, at 876. *But see* Schmidt et al., *supra* note 331, at 65 (listing the "operational validity" of Agreeableness as a job performance predictor as .08, Extraversion as .09, and Openness to Experience as .04).

335. According to Morgeson et al.,

Even if one makes the most optimistic assumptions about the low correlations among the Big Five and about the correctness of the entire string of corrections needed to reach the conclusion that the entire span of normal personality accounts for about 5% of the variance in job performance, one is left with the conclusion that about 95% of the variance in performance appears to have nothing to do with normal personality, as measured by currently available methods.

Some psychologists express more optimism about the utility of personality tests as a pre-employment screening mechanism. For example, one meta-analysis of personality variables in organizational settings concluded that the Big Five personality traits predict such aspects of performance as organizational-citizenship behaviors, interpersonal behaviors, and counterproductive-workplace behaviors.³³⁶ Another study focused on the relationship between the Five Factor Model and social-undermining behaviors in the workplace, concluding that individuals low in Agreeableness and Conscientiousness and high in Narcissism are more likely to engage in such behaviors.³³⁷ Although it is understandable that employers would prefer workers who display organizational-citizenship behaviors and refrain from social-undermining behaviors, courts should not find such criteria job-related and consistent with business necessity for all jobs in all workplaces. Otherwise, individuals with mental disabilities might find themselves screened out from all employment opportunities, contrary to the purpose of the Americans with Disabilities Act. Instead, these criteria should be found job-related only for those positions requiring significant interpersonal interaction.³³⁸

Notably, one of the psychology articles most critical of personality tests made some suggestions for improvement which are reflected in many of the modern tests discussed in Section II.D. The article suggests “contextualizing the items by adding ‘at work’ to each.”³³⁹ The now-disfavored Kronos/Unicru test did not focus on the workplace context, whereas the McDonald’s, Pizza Hut, and PetSmart assessments taken by the author in Spring 2019 all asked the test taker to answer with reference to the workplace.³⁴⁰ On their face, questions asking about one’s

Morgeson et al., *supra* note 328, at 1037. “This strikes us as an argument against relying too heavily on personality in selection.” *See id.*

336. *See* Ones et al., *supra* note 329, at 998.

337. *See* Hilary L. DeShong et al., *Comparing Models of Counterproductive Workplace Behaviors: The Five-Factor Model and the Dark Triad*, 74 *PERSONALITY & INDIVIDUAL DIFFERENCES* 55, 58–59 (2015). Social-undermining behavior, a specific type of counterproductive workplace behavior, is behavior “intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation.” *Id.* at 55. Such behavior can be interpersonal or organizational, depending on its target. *See id.*

338. *See* Wendy F. Hensel, *People with Autism Spectrum Disorder in the Workplace: An Expanding Legal Frontier*, 52 *HARV. C.R.-C.L. L. REV.* 73, 93 (2017) (contending that “[w]hile social skills proficiency and personal qualities may be relevant to some jobs, in others, they are incidental at best”).

339. Morgeson, *supra* note 328, at 1043 (stating that such contextualizing is “a potential way to achieve better empirical results”); *see also* Melson-Silimon et al., *supra* note 252, at 129 (recommending that personality assessments ask about behavior in the workplace and “consider the use of personality measures with explicitly work-related test content”).

340. *See supra* Section II.D.

personal qualities at work appear more likely to be job-related than are questions about one's personal qualities in general.³⁴¹ Such questions also seem more consistent with the Supreme Court's warning in *Griggs* that "any tests must measure the person for the job and not the person in the abstract."³⁴²

Three other suggestions—determining personality by a means other than self-reports; combining assessment of personality with that of another trait like cognitive ability; and developing custom tests³⁴³—have also been implemented by some of today's personality test vendors. Neither Pymetrics nor HireVue uses self-reports. Pymetrics determines applicant personality based on videogame performance, and HireVue determines it based on analysis of video interviews.³⁴⁴ Pymetrics' videogames assess cognitive traits as well as personality traits, and vendors like FurstPerson and AspiringMinds offer cognitive-ability assessments in addition to personality assessments. Psychologists contend that multi-measure tests of both cognitive ability and personality reduce the adverse-impact problem of measuring only cognitive ability and are more effective at predicting job performance.³⁴⁵

Regarding custom tests, today's personality-test vendors promote their assessments as specifically designed for particular jobs and organizations, such that the assessments are more likely to be job-related. For example, the Hogan Personality Inventory has different scales for service, clerical, sales, and managerial jobs,³⁴⁶ and AspiringMinds states that its personality test has been validated for more than 100 job roles.³⁴⁷ Other vendors, like TalentSorter, Pymetrics, and HireVue, reach their conclusions about what personality traits to look for by testing a company's existing top performers in a particular job.³⁴⁸ This idea of replicating the personality traits of a company's best employees can be traced back to the Unicru test, which "allow[ed] you to clone your best,

341. The greater apparent job-relevance of such questions may also reduce applicant hostility to pre-employment personality tests. *See supra* Section II.D.

342. *Griggs v. Duke Power Co.*, 401 U.S. 424, 436 (1971).

343. *See Morgeson, supra* note 328, at 1030.

344. These techniques avoid the "faking" concern that exists with self-reports.

345. *See Schmidt et al., supra* note 331, at 41, 47 (noting the "high composite validity" of a cognitive ability test and a test of integrity, the latter which "measures mostly conscientiousness"); Thomas & Scroggins, *supra* note 42, at 26; *see also* Whitney Martin, *The Problem with Using Personality Tests for Hiring*, HARV. BUS. REV. (Aug. 27, 2014), <https://bit.ly/3cxZ8O2> (stating that "[p]ersonality tests are most effective when combined with other measures with higher predictive validity, such as . . . cognitive ability").

346. *Hogan Personality Inventory, supra* note 70.

347. *Products: Personality Test, supra* note 77.

348. *See supra* notes 78 & 82 and accompanying text; *see also How it Works, supra* note 64 ("Find out Who Your Top Performers Are & Hire More People Just Like Them").

most reliable people.”³⁴⁹ If a trait is associated with excellent performance in a particular job and workplace, it may seem like a tautology that seeking that trait in future hires is job-related and consistent with business necessity. Yet if a company’s existing employees are not diverse, replicating them will not engender diversity. This is the algorithmic-bias problem discussed in Section III.A, which poses unique challenges and opportunities in the disability context.

D. Algorithmic Bias: Seeking to Replicate Personality Traits of Top Employees Can Perpetuate the Exclusion of Individuals with Disabilities

Scholars have noted that “trying to predict qualities of good future workers based on the qualities of current workers and existing work culture will not lead to change”³⁵⁰ but rather runs the risk of “reproducing existing inequality.”³⁵¹ Such algorithmic bias is particularly likely to impact applicants with disabilities due to their underrepresentation in the workplace.³⁵² In 2019, only 30.9% of working-age persons with a disability were employed, compared to 74.6% of their counterparts with no disability.³⁵³ This dramatic difference between employment rates persisted across all levels of education.³⁵⁴ Among individuals with disabilities, employment outcomes are worse for those with mental disabilities than for those with physical disabilities.³⁵⁵

Accordingly, a company’s existing work force, including its top performers, may not include individuals with mental disabilities. Determining the company’s preferred personality traits based on those possessed by its top performers—given the research correlating personality traits with certain mental impairments—may perpetuate the exclusion of applicants with mental disabilities. The critical question is

349. Overholt, *supra* note 48.

350. Bodie et al., *supra* note 11, at 1013.

351. Bornstein, *supra* note 78, at 523.

352. The training data used to develop algorithms is based on the norm, but the “concept of ‘normal,’ as well as the tools and techniques for enforcing normalcy, have historically constructed the disabled body and mind as deviant and problematic.” Whittaker, *supra* note 319, at 3. Moreover, although “disability has been largely omitted from the AI-bias conversation,” “[d]isabled people have been subject to historical and present-day marginalization, much of which has systematically and structurally excluded them from access to power, resources, and opportunity. Such patterns of marginalization are imprinted in the data that shapes AI systems, and embed these histories in the logics of AI.” *Id.*

353. Press Release, Bureau of Labor Statistics, Persons with a Disability: Labor Force Characteristics Summary (Feb. 26, 2020), <https://bit.ly/332FTcl>.

354. *See id.*

355. *See* Michelle Maroto & David Pettinicchio, *Twenty-Five Years After the ADA: Situating Disability in America’s System of Stratification*, 35 *DISABILITY STUDIES Q.* (2015).

this: if the company employed workers with mental disabilities, might they perform differently on the personality test but nonetheless do the job well? Employers and test vendors offer no answer to that question, which leads data scientist Cathy O’Neil to conclude that pre-employment personality tests are “weapons of math destruction.”³⁵⁶

Personality-test vendors do not deny the potential for algorithmic bias; rather, they claim to audit and correct their own algorithms to ensure no adverse effect based on the characteristics protected by Title VII. That reassurance does not extend to disability, however. This is one of the challenges of addressing algorithmic bias in the disability context: employers cannot ask applicants about their disability-status, and disabilities vary greatly, making statistics about the impact of personality tests on persons with disabilities difficult to obtain. Nonetheless, as argued in Section IV.B.2, vendors should attempt to obtain such statistics, which could reveal the extent to which personality tests screen out individuals with disabilities.

Another challenge of addressing algorithmic bias and disability is the fact that disability can be relevant to job performance in ways that race and sex are not. Limitations caused by an individual’s disability could render him or her unable to perform a desired position. Given that relevance, the ADA does not protect all individuals with disabilities from discrimination based on disability, but only those who are qualified and able to perform the job with or without reasonable accommodation.³⁵⁷ Similarly, personality traits at certain extremes may make an applicant a poor candidate for a particular position. One can imagine a job requiring so much sustained interaction with customers that an applicant scoring very low on Extraversion would not perform the job well. Even if the applicant’s low Extraversion score is correlated with a disability, it still may seem fair and appropriate for that score to bar the applicant from the position.³⁵⁸

356. O’NEIL, *supra* note 115, at 109, 111. O’Neil explains that personality-based hiring algorithms often receive “precious little feedback”: “The companies hiring minimum-wage workers . . . are managing herds. They slash expenses by replacing human resources professionals with machines, and those machines filter large populations into more manageable groups. Unless something goes haywire in the workforce—an outbreak of kleptomania, say, or plummeting productivity—the company has little reason to tweak the filtering model. It’s doing its job—even if it misses out on potential stars.” *Id.* at 111.

357. In contrast, Title VII prohibits all discrimination in employment based on race, color, sex, religion, or national origin, subject only to the very narrow bona fide occupational qualification defense to discrimination based on sex, religion, or national origin. 42 U.S.C. §§ 2000e-2(a), (e) (2018).

358. *See also* Gonzalez et al., *supra* note 258 at 154 (noting that “it is possible that an individual with a constellation of personality traits similar to those found with borderline personality disorder may be unable to effectively perform a managerial role even in the presence of reasonable accommodations”).

Along with the challenges the ADA poses in connection with algorithmic bias, however, it also presents an opportunity unmatched by Title VII: the duty of reasonable accommodation.

E. Avoiding the Test or Taking an Alternative Assessment as a Reasonable Accommodation

Addressing algorithmic bias can present a “whack-a-mole” problem, where the new algorithm—re-engineered to have less negative impact on members of one protected group—now has an increased adverse impact on another protected group.³⁵⁹ Title VII takes an all-or-nothing approach to eradicating adverse effects on protected groups;³⁶⁰ there is no opportunity for a Title VII plaintiff to argue that a personality test may be fine as applied to other applicants but is unfair as applied to the plaintiff.³⁶¹ Through its duty of reasonable accommodation, however, the ADA contemplates exceptions or alternatives to qualification standards based on the needs of an individual applicant with a disability.³⁶² Courts have held that tests or qualification standards that tend to screen out an individual because of his or her disability violate the ADA unless the employer can “show that the allegedly discriminatory qualification requirement is (i) job-related, (ii) consistent with business necessity, and (iii) that performance cannot be accomplished with a reasonable accommodation.”³⁶³

Applicants with disabilities who are concerned that they will be screened out by a pre-employment personality test should request as a

359. King & Mrkonich, *supra* note 111, at 580 (explaining that “[t]he employer finds itself in the center of a game that ends only if there is a solution that minimizes the algorithm’s disparate impact on every protected group”).

360. If a plaintiff proves that a test has a disparate impact on members of a protected group, use of the test violates Title VII unless the employer can prove that the test is job-related and consistent with business necessity. *See* § 2000e-2(k). Even if the employer can prove that affirmative defense, using the test is nonetheless unlawful if the plaintiff can demonstrate the existence of a less discriminatory alternative that the employer refuses to adopt. *See id.*

361. In fact, under Title VII it is dangerous for an employer to excuse any applicant from taking a test, because the exception suggests that the test is not actually consistent with business necessity.

362. *See* King & Mrkonich, *supra* note 111, at 582–83 (noting that “a disabled applicant is entitled to reasonable accommodations irrespective of how anyone else is affected by a particular screening procedure”); *see also* Stewart J. Schwab & Steven L. Willborn, *Reasonable Accommodation of Workplace Disabilities*, 44 WM. & MARY L. REV. 1197, 1200 (2003) (contrasting the “sameness model” of Title VII—“requiring employers to treat African Americans and women exactly the same as others” with the “difference model” of the ADA—“requiring employers to treat individuals with disabilities differently and more favorably than others”).

363. *Williams v. ABM Parking Servs.*, 296 F. Supp. 3d 779, 790 (E.D. Va. 2017); *see also* 42 U.S.C. § 12113(a) (2018); *Bates v. United Parcel Serv., Inc.*, 511 F.3d 974, 993 (9th Cir. 2007).

reasonable accommodation an alternative to the test or the opportunity to opt out of the test. This means that the applicant must disclose their mental disability,³⁶⁴ creating a risk that the employer will intentionally discriminate against them.³⁶⁵ Intentional discrimination may seem particularly likely due to the history of stigma against those with mental disabilities.³⁶⁶ Whether it is worthwhile to undertake such a risk depends on how likely the test is to screen out the applicant because of the applicant's disability,³⁶⁷ which is another argument in favor of test vendors obtaining statistics on the exclusionary effect of their tests on various disabilities.³⁶⁸

An alternative to a personality test might be a test focusing more on actual workplace behavior. Such behavior is more likely to be connected to an essential function of the job than are the answers to questions like "I hardly ever feel sad or unhappy" or "People say that I am eccentric." A situational judgment test, job simulation, or a job trial could be especially useful here in order to measure more directly whether the applicant, despite his or her disability, can perform the essential functions of the job.³⁶⁹ Although it may seem a stretch to argue that

364. Reasonable accommodation is always prospective in nature. *See* Timmons, *supra* note 270, at 283. Employers need only accommodate the known limitations of individuals with disabilities. *See* 42 U.S.C. § 12112(b)(5)(A) (2018).

365. While the ADA prohibits intentional discrimination against qualified individuals with disabilities, a plaintiff may not be able to prove that the employer was motivated by disability rather than by some other factor. *See* § 12112(a).

366. *See* Hensel, *supra* note 338, at 87. In light of the particular stigma associated with having a personality disorder, Manuel F. Gonzalez and his coauthors suggest that "organizations proactively identify and develop application processes that allow candidates with PDs to discreetly request and receive accommodations in the testing process, specifically with respect to application stages where personality is assessed" in order to "provide a psychologically safe environment for individuals to request accommodations and minimize the risk of potential bias that PD stereotypes might introduce later in the application process." Gonzalez et al., *supra* note 258, at 155.

367. *See* Hensel, *supra* note 338, at 88 (arguing that, despite the risk of stigma, it may be worthwhile for some individuals with autism to disclose their disability early in the application process, before any interview takes place).

368. *See supra* Section IV.B.2. *Cf.* King & Mrkonich, *supra* note 111, at 582 (noting that it is "unfair to base hiring decisions on criteria that prejudice an applicant's disability" but that "unless a 'test' is construed to include Big Data algorithms, and unless applicants are informed of the test's elements, disabled applicants may be denied reasonable accommodation in the application process"). This kind of statistical information could help applicants with disabilities weigh "the calculus of disclosure." *See* Hensel, *supra* note 338, at 88.

369. According to management consultant Charles Gerhold, "[s]tructured interviews with good behavioral questions can be really revealing of how a person actually behaves. And the best predictor of future behavior is truly past behavior." Rockwood, *supra* note 9; *see also* Gonzalez et al., *supra* note 258, at 154 (noting in the reasonable-accommodation context that "an applicant who is actively treating his or her PD with therapy or medication may perceive an unfair disadvantage if the PD were counted against him or her as a result of the content of the personality inventory").

opting out of a personality test could be a reasonable accommodation, test vendors state consistently that performance on a personality test should not be the sole basis for a hiring decision.³⁷⁰ Is it truly unreasonable to remove one hurdle to hiring for individuals with mental disabilities, members of a group that remains seriously underrepresented in the workforce almost 20 years after the ADA's enactment? Notably, the authors of one of the *Industrial and Organizational Psychology* commentaries on personality testing and the ADA state that appropriate accommodation for candidates with personality disorders could include:

[W]aiving the assessment process altogether for the candidate, not scoring the personality traits aligned with PDs [personality disorders] for individuals requesting accommodation, allowing the candidate to opt out of completing certain items that they feel would reveal their PD or not scoring those items, or considering alternative administration methods and formats for the assessment.³⁷¹

In response to requests to opt out of or take an alternative to a pre-employment personality test, employers are likely to assert that no accommodation is necessary because the applicant is not qualified: if the applicant cannot pass the personality test, which is job-related and consistent with business necessity, then he or she cannot perform the essential functions of the job.³⁷² In an article published in *Bloomberg BNA's Daily Labor Report*, attorneys from the law firm Akin Gump contended as follows:

[A]n employer should not be required by the ADA to allow an applicant to forgo a personality test that measures job-related and necessary interpersonal skills simply because the applicant fears that his disability will cause him to perform poorly on the test. If the test measures interpersonal skills and possessing strong interpersonal skills is proven to be a necessary job requirement, i.e., properly validated, the employer should not be required to modify the test to accommodate the applicant."³⁷³

370. See Meinhert, *supra* note 42; O'Connell, *supra* note 47.

371. See Gonzalez et al., *supra* note 258, at 154–55.

372. See 29 C.F.R. § 1630.10(a) (2020), App. (“Selection criteria that exclude, or tend to exclude, an individual with a disability or a class of individuals with disabilities because of their disability but do not concern an essential function of the job would not be consistent with business necessity.”); see also Timmons, *supra* note 270, at 275 (noting that “[b]oth the ‘qualified’ inquiry and the affirmative defense to disparate impact discrimination ask the same question: despite his or her disability, can the plaintiff do the job?”).

373. Esther G. Lander et al., *Hiring a “Will Do” Workforce: ADA Challenges to Personality Tests*, 242 DAILY LABOR REPORT I-1 (Dec. 17, 2014).

Applicants should not assume, however, that because a job involves interaction with others, interpersonal skills are necessarily an essential function of the job and one's failure to achieve a certain cut-off score on the test means inability to do the job. What does the employer or test vendor mean by interpersonal skills? If the test is based on the Five Factor Model,³⁷⁴ then is the relevant factor Extraversion, Agreeableness, some combination of those traits, or potentially other traits? How much interaction with others does the particular job actually require, and could this applicant—particularly if he or she received some coaching—accomplish that interaction effectively?³⁷⁵ If an applicant's answer to every test question measuring Agreeableness indicates Antagonism, the trait on the opposite end of the spectrum, that suggests the applicant would be a poor fit for a customer-service job. Yet if the applicant merely scores in the bottom half of test-takers on Agreeableness, are we certain he or she cannot do the job?³⁷⁶

In addition, applicants should ask whether individuals with disabilities were included in the population on which the test was validated.³⁷⁷ Given the underrepresentation of individuals with mental disabilities in the workplace, the answer is likely to be no. As the scholarship on algorithmic bias makes clear, if a hiring algorithm was developed based on incomplete data—data that does not fully represent

374. If the test is not based on the Five Factor Model, it may be insufficiently research-based. See Meinhert, *supra* note 42 (noting that assessments based on the Five Factor Model have been subject to the most evaluation by researchers).

375. See Rockwood, *supra* note 9. Similarly, Deniz Ones, an industrial and organizational psychologist at the University of Minnesota, has stated that “a worker's ranking on measurements of conscientiousness can tell bosses about work ethic.” Weber & Dwoskin, *supra* note 3. Presumably, employers would prefer that all their employees have a strong work ethic, but that does not necessarily indicate that a certain Conscientiousness score is an essential function of every job.

376. Psychologists John J. Donahue and Rebecca J. Thompson recommend that, rather than taking a particular work environment or job structure as a given and using personality tests to screen out certain individuals, “researchers and practitioners explore ways in which organizations can support and/or accommodate those with diagnosed personality disorders and high levels of personality dysfunction.” John J. Donahue & Rebecca J. Thompson, *General and Clinical Personality Assessment in Workplace Settings: Lines in the Sand or Regions on the Beach?*, 19 *INDUS. & ORGANIZATIONAL PSYCHOL.* 190, 193 (2019). They reason that, in light of the prevalence of personality disorders and the importance of work in people's lives, “employers should seek ways to include rather than exclude these individuals into the workplace.” *Id.*

377. See Rockwood, *supra* note 9 (noting that an assessment is legally vulnerable if it has not been validated based on a diverse population). Applicants would seek such information in connection with their reasonable-accommodation request to opt out of the personality test. See *Snapp v. United Trans. Union*, 889 F.3d 1088, 1095 (9th Cir. 2018) (stating that “notifying an employer of a need for an accommodation triggers a duty to engage in an ‘interactive process’ through which the employer and employee can come to understand the employee's abilities and limitations”).

the population on which the algorithm will be used—it risks reproducing existing inequalities.³⁷⁸

The *Leskovisek* case discussed in Section IV.B provides an analogy. As a reasonable accommodation for their autism, the plaintiffs asked for a waiver of the State of Illinois’s test and structured-interview requirements for obtaining full-time employment with the Illinois Department of Transportation.³⁷⁹ The hiring process, including the test and structured interview, may have been fair and reasonable for most applicants. The traits and skills revealed by the test and interview might have correlated with successful performance of the job, such that most top performers on the job would score highly on both the test and the interview. Nonetheless, the plaintiffs argued that the test and interview requirements were unfair as applied to them: due to their disabilities, they would not perform well on the test or interview. Given their work as tech trainees, the *Leskovisek* plaintiffs were in the unusual position of having already proven that they could perform the essential functions of the data-entry jobs; most applicants facing pre-employment personality tests will not be in that position. Yet applicants with disabilities may be able to argue that, similarly, they could perform a job’s essential functions despite their performance on a personality test—particularly if the test was normed based on individuals without disabilities—and that employers should offer them that opportunity. Although this accommodation may be more costly, the law should not make it easy for employers to screen out individuals with disabilities at an early stage of the hiring process.

The ADA requires an individualized inquiry into whether, despite his or her impairment, a disabled applicant nonetheless can do the job.³⁸⁰ The entire concept of reasonable accommodation is a recognition that sometimes individuals with disabilities need to be treated differently in order to obtain equal opportunity in the workplace. This individualized inquiry is inconsistent with pre-employment personality tests that reject applicants with disabilities because their personality traits are different from those of most employees succeeding in the particular job. This does not mean that employers should reject all personality assessments,

378. See Bodie et al., *supra* note 11, at 1022; King & Mrkonich, *supra* note 111, at 582.

379. See *Leskovisek v. Ill. Dep’t of Transp.*, 305 F. Supp. 3d 925, 930 (C.D. Ill. 2018).

380. See Ryan Golden, *EEOC Official: “Qualification Standards” Could Lead to ADA Violations*, HR DIVE (Dec. 11, 2018), <https://bit.ly/36bO2wX> (quoting EEOC assistant legal counsel Christopher Kuczynski’s warning about employers imposing overly strict qualification standards: “There are going to be people who may be able to perform essential functions in spite of the fact they have certain conditions, and the ADA is always about an individualized assessment of applicants and employees”).

particularly those proven to predict success in a particular job and to improve workplace diversity based on traits other than disability. It does, however, mean that when an applicant with a disability requests an accommodation related to a personality test, employers should be receptive and offer alternative methods of determining whether the applicant can perform the job's essential functions.

Employers may argue that such accommodations are not required by the ADA because they would impose an undue hardship on the conduct of the employers' business.³⁸¹ Courts should not be quick to accept that contention. One of the biggest selling points behind pre-employment personality tests is that they provide employers with a cheap and easy way to eliminate applicants and narrow the field.³⁸² Yet employers have always sought to predict employee performance through easy-to-obtain information.³⁸³ The fundamental premise underlying *Griggs* and the disparate impact theory is that, even though it may be efficient to use general intelligence as a proxy for probable job performance or to use height and weight as a proxy for physical strength, such proxies are unlawful when they adversely impact protected groups. Even more than Title VII, the ADA focuses on each individual's ability to do the job. It should not be deemed undue hardship to prohibit employers from using the personality proxy in a way that eliminates from the field many applicants with mental disabilities,³⁸⁴ instead requiring them to use alternative means for determining whether applicants with such disabilities can actually perform a job's essential functions.³⁸⁵

381. See 42 U.S.C. § 12112(5)(A) (2018).

382. See Chamorro-Premuzic, *supra* note 1; Weber & Dvoskin, *supra* note 3. An article in *HR Magazine* described a nonprofit that used the DiSC—"a personality assessment that scores subjects on four different traits: dominance, influence, steadiness and conscientiousness"—to assess the finalists for all its open positions. Rockwood, *supra* note 9. A consultant noted that the assessment was "popular because it's inexpensive and easy to use." *Id.* An Editor's Note indicates that the article was updated online "to note that the makers of the DiSC assessment don't recommend it for pre-employment screening," as the assessment does not measure skills, aptitudes, or facts specific to any job position. *Id.*

383. See Bodie et al., *supra* note 11, at 1022. In fact, employers "used protected classes as proxies for ability in particular fields until federal law prohibited that practice." *Id.*

384. See O'Neil, *supra* note 18 (noting that, given the pervasiveness of pre-employment personality tests, "they could systematically exclude an entire population with disabilities from work—precisely what the ADA was meant to avoid").

385. According to the National Institute of Mental Health, "[n]early one in five U.S. adults live with a mental illness." *Mental Illness*, NAT'L INST. MENTAL HEALTH (Nov. 2020), <https://bit.ly/36fapzX>. If 20% of applicants ask to opt out of personality tests, employers may decide to forego such tests entirely.

IV. CONCLUSION

Because the Five Factor Model of Personality was not designed to reveal mental impairments, modern pre-employment personality assessments are not medical examinations and are not *per se* unlawful under the Americans with Disabilities Act. This conclusion is gratifying, given the potential of these hiring tools to eliminate unconscious bias, increase diversity, and improve the fit between worker and job. Yet due to the correlation between FFM traits and mental disabilities, personality tests do pose a risk of screening out applicants with such disabilities, which violates the ADA, unless the tests are job-related and consistent with business necessity.

How big is the risk that such tests have a disparate impact based on disability? We do not know the answer to that question, and employers cannot easily determine the answers themselves. Personality assessment vendors—who tout the numerous benefits of their products, including improved diversity—should attempt to obtain statistics on the extent to which individuals with mental disabilities are disproportionately screened out by their assessments and, if so, whether poor performance on the test indicates inability to do the job in question.

Under the specific language of the ADA, and contrary to the statements of some courts, individual plaintiffs do not need statistical evidence of group impact to bring a claim. Instead, a plaintiff can demonstrate that a personality assessment has a disparate impact on him or her by showing that the assessment seeks to eliminate candidates based on particular Five Factor Model traits and that the plaintiff's disability is connected to those traits. Moreover, the less an employer is willing to disclose about what theory of personality underlies a challenged assessment and what traits it seeks to screen in or out, the more willing a court should be to assume disparate impact and to proceed to an evaluation of the employer's affirmative defense.

Regarding whether these tests are job-related and consistent with business necessity, the psychological evidence correlating personality traits with job performance is underwhelming. Modern pre-employment personality assessments do fare better on this point than did the once widely used Unicru test. Many of today's tests specifically ask about one's personal qualities and preferences in the workplace, rather than in general. Modern test vendors promote their assessments as specifically designed for particular jobs and organizations, following a detailed job analysis, such that they are more likely to be job-related. It seems less likely today that someone like Kyle Behm would apply to seven different jobs that would all use the same test and would be scored the same way. However, courts should not accept a blanket statement by an employer that interpersonal skills are important for all of its job positions, making

a personality assessment job-related and consistent with business necessity. They must evaluate to what extent particular personality traits are critical to the essential functions of the position in question.

Although modern personality assessments are superior to Unicru, many of them reflect the Unicru vision of allowing employers “to clone your best, most reliable people” and thus present algorithmic bias concerns. Given the underrepresentation of individuals with mental disabilities in the workplace, along with the correlation between personality traits and such disabilities, seeking to replicate the personality traits of one’s top performers may perpetuate exclusion and inequality. Employers and test vendors will be best positioned if they can show that the training data giving rise to the challenged algorithm included those with mental disabilities.

Finally, the duty of reasonable accommodation applies to pre-employment qualification standards like personality assessments. Applicants with disabilities who are concerned about being screened out by a personality test should request as a reasonable accommodation an alternative to the test—perhaps an assessment more focused on actual job tasks—or the opportunity to opt out of the test. The ADA is intended to ensure that individuals with disabilities are not barred from jobs that they can perform. A low score on a personality test, particularly if the test was normed based on the personalities of employees without disabilities, does not necessarily indicate an inability to perform a job’s essential functions. This individualized assessment may not be efficient; while the employer can use a personality test to screen out many non-disabled applicants early in the hiring process, it cannot do the same for applicants with disabilities who request accommodation. However, individualized assessment, rather than a personality proxy, is what the law requires, and it is what applicants with disabilities should demand.