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AUTOMATED VIDEO INTERVIEWING AS THE NEW PHRENOLOGY

Ifeoma Ajunwa[†]

ABSTRACT

This Article deploys the new business practice of automated video interviewing as a case study to illuminate the limitations of traditional employment antidiscrimination laws. Employment antidiscrimination laws are inadequate to address the unlawful discrimination attributable to emerging workplace technologies which gatekeep employment opportunities. The Article maintains that the practice of automated video interviewing is based on shaky or unproven social scientific principles that disproportionately impact racial minorities. In this way, the practice of automated video interviewing is analogous to the pseudoscience of phrenology, which enabled societal and economic exclusion through the legitimization of eugenicist and racist attitudes. After parsing the limitations of traditional antidiscrimination law to curtail emerging workplace technologies such as video interviewing, this Article argues that ex ante legal regulations, such as those derived from the late Professor Joel Reidenberg's Lex Informatica framework, may be more effective than ex post remedies derived from the traditional employment antidiscrimination law regime.

The Article argues that one major benefit of applying a Lex Informatica framework to video interviewing is developing legislation that considers the technology's capabilities rather than how actors intend to use it. In the case of automated hiring, such an approach would mean actively using the Uniform Guideline on Employee Selection Procedures to govern the design of automated hiring systems. For example, the guidelines could dictate design features for the collection of personal information and treatment of content. Other frameworks, such as Professor Pamela Samuelson's "privacy as trade secrecy" approach could govern design features for how information from automated video interviewing systems may be transported and shared. Rather than reifying techno-solutionism, a focus on the technological capabilities of automated decision-making systems offers the opportunity for regulation to start at inception, which in turn could affect the design and development of the technology. This is a preemptive approach that sets standards for how the technology will be used and is a more proactive legal approach than merely addressing the negative consequences of the technology after they have occurred.

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† Associate Professor of Law, University of North Carolina School of Law. Many thanks to the great late Professor Joel Reidenberg whose prescient scholarship informs this piece. Thanks also to my research assistants, Kylie McDonnell and Jake Schindler. A special thanks to the editors of the *Berkeley Technology Law Journal* for their fastidious edits.

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I. INTRODUCTION

Jessica Clements, a job applicant with a visual impairment, had this to say about their automated video interview: “I couldn’t read the questions, I had to zoom in. And when it flipped to the front-facing camera, it was actually really distracting.”¹ Alex Huang, a job applicant and non-native English speaker, suspects he lost several job opportunities because automated video interviewing is prevalent in his job industry, financial services.² He believes that although he speaks fluent English, automated video interview systems had trouble understanding his tone and syntax.³ He finally got his current job position by insisting on an interview conducted by a human rather than an AI system.⁴ As AI-based video interviewing continues to grow as a prominent recruiting tool, it is critical to examine how such workplace technologies could serve as end runs against employment antidiscrimination laws such as Title VII of the Civil Rights Act of 1964⁵ and the Americans with Disabilities Act.⁶

This Article deploys automated video interviewing as a case study to consider the limitations of traditional employment antidiscrimination laws in addressing unlawful discrimination—particularly when such discrimination has been mediated by emerging workplace technologies such as automated hiring programs.⁷ In another law review article, I have noted how the adoption of automated technologies for hiring represents a paradox.⁸ The quandary is that automated technologies, which are often adopted as antibias interventions, have often been found to not only replicate the bias they were

1. Alex Lee, *An AI to Stop Hiring Bias Could Be Bad News for Disabled People*, WIRED (Nov. 26, 2019), <https://www.wired.co.uk/article/ai-hiring-bias-disabled-people>.

2. Telephone interview with Alex Huang (Aug. 6, 2020).

3. *Id.*

4. *Id.*

5. 42 U.S.C. §§ 2000e–2000e-17.

6. 42 U.S.C. §§ 12101–12213.

7. *See generally* James Grimmelman & Daniel Westreich, *Incomprehensible Discrimination*, 7 CAL. L. REV. ONLINE 164, 176 (2017) (discussing limited legal protections for job applicants confronted with automated hiring platforms); Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857, 887–88 (2017); Charles A. Sullivan, *Employing AI*, 63 VILL. L. REV. 395, 395 (2018); Jeffrey M. Hirsch, *Future Work*, 2020 U. ILL. L. REV. 889, 939–41 (2020); Ifeoma Ajunwa, *An Auditing Imperative for Automated Hiring Systems*, 34 HARV. J.L. & TECH. 621 (2021).

8. *See generally* Ifeoma Ajunwa, *The Paradox of Automation as Anti-Bias Intervention*, 41 CARDOZO L. REV. 1671, 1679 (2021) (arguing that existing disparate impact legal frameworks are inadequate to address algorithm-based discrimination and advocating for a *discrimination per se* cause of action under Title VII, which would allow plaintiffs to “assert that a hiring practice . . . is so egregious as to . . . shift the burden of proof . . . to the defendant . . . to show that its practice is non-discriminatory.”).

meant to evade but, in fact, also amplify it.⁹ Confounding the issue is that the deployment of technology intermediaries renders bias both harder to discover and even more onerous to prove.¹⁰

This Article is descriptive as it illuminates the legal problems associated with automated video interviewing as a business practice. The Article is also prescriptive as it charts a way towards redress that expands our understanding of available legal remedies. To do this, the Article brings together two important fields of legal literature, integrating law and technology scholarship and employment law scholarship. Employment law scholarship has often been preoccupied with ex post adversarial measures for addressing unlawful discrimination.¹¹ Law and technology scholarship, on the other hand, has evolved to focus on ex ante collaborative methods such as auditing regimes and design features modification to address potential discrimination.¹² In the case of emerging workplace technologies, such as video interviewing, this Article operates from the normative viewpoint that ex ante legal regulations, such as those derived from the late Professor Joel Reidenberg's *Lex Informatica* framework,¹³ are more effective than ex post remedies derived from the traditional employment antidiscrimination law regime.

This Article proffers two important contributions. First, in line with my previous articles on emerging workplace technologies, it continues to challenge the received wisdom that AI technologies deployed in the workplace could be devoid of human bias.¹⁴ Not only have several real-world findings proven this assumption to be false,¹⁵ the nature and function of emerging AI technologies

9. *Id.*

10. *See generally* Ajunwa, *supra* note 7, at 639 (arguing that automated hiring technology furthers employment discrimination while masking such discrimination through opaque, unaccountable algorithms).

11. *See* Ajunwa, *supra* note 8, at 1685.

12. *See id.*; *see also* Kim, *supra* note 7, at 901; Solon Barocas & Andrew Selbst, *Big Data's Disparate Impact*, 104 CALIF. L. REV. 671, 718–19 (2016).

13. *See* Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553, 581 (1998) (comparing some current legal policy areas to challenges faced by early merchants and arguing that the body of law created by those merchants, known as “Lex Mercatoria,” could be used to regulate information flows in the digital age); *see also infra* Part IV.

14. *See* Ajunwa, *supra* note 8, at 1671 (“A received wisdom is that automated decision-making serves as an anti-bias intervention. The conceit is that removing humans from the decision-making process will also eliminate human bias. The paradox, however, is that in some instances, automated decision-making has served to replicate and amplify bias.”); *see also* Ajunwa, *supra* note 7, at 679.

15. *See generally* Jeffrey Dastin, *Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women*, REUTERS (Oct. 10, 2018, 7:04 PM), <https://www.reuters.com/article/us->

intimate that the opposite is true; there is convincing evidence that emerging workplace technologies can amplify, routinize, and obscure unlawful employment discrimination.¹⁶ Given this known sociotechnical phenomenon, it behooves policymakers to attend to the potential for unlawful discrimination occasioned by the use of these new technologies.

A second contribution of this Article is an invitation to policymakers and employment antidiscrimination law advocates to join in dialogue with law and technology scholars. Too often, law is conceptualized as if it exists in a vacuum, and inadequate attention is paid to societal forces. The Article invites the readers to contemplate how law and technology are co-constitutive.¹⁷ Much like the law holds the power to constrain technological innovations, similarly, the capabilities of emerging technologies should inform new legal regimes. Using automated video interviewing as case study, this Article adds to the growing legal scholarship on novel legal frameworks to address new controversies of law wrought by new technical inventions.¹⁸

The roadmap for the Article is as follows: Part I charts the rise of automated video interviewing as a business practice rooted in the drive for efficiency in the hiring process. It also describes the phrenological origins of automated video interviewing. Part II tracks the limitations of legal protections

amazon-com-jobs-automation-insight/amazon-scrap-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G (detailing the discovery of an Amazon-built automated hiring system that turned out to be discriminatory against women); Sheridan Wall & Hilke Schellmann, *LinkedIn's Job Matching AI Was Biased. The Company's Solution? More AI*, MIT TECH. REV. (June 23, 2021), <https://www.technologyreview.com/2021/06/23/1026825/linkedin-ai-bias-ziprecruiter-monster-artificial-intelligence/>; Lydia Dishman, *The Bias You Didn't Know Existed in Job Ads and Recruiting Software*, FAST CO. (Sept. 7, 2015), <https://www.fastcompany.com/3051182/the-bias-you-didnt-know-existed-in-job-ads-and-recruiting-software>.

16. See Barocas & Selbst, *supra* note 12, at 720; Ajunwa, *supra* note 7, at 630 (noting that automated hiring platforms, in particular, hold the potential to both amplify and obfuscate bias).

17. See generally Lauren Edelman, *When Organizations Rule: Judicial Deference to Institutionalized Employment Structures*, 117 AM. J. SOCIO. 888 (2011) (noting the ways that organizational development is influenced by the law and how organizations can in turn influence law); JULIE E. COHEN, *BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTION OF INFORMATIONAL CAPITALISM* (2019) (arguing that informational capitalism has developed amid loopholes in extant law and also now seeks to influence future law).

18. Some choice examples include both literature in employment and labor law, including Kim, *supra* note 7 and Hirsch, *supra* note 7, and also, beyond: Sandra G. Mayson, *Bias In, Bias Out*, 128 YALE L.J. 2218 (2019); Margot E. Kaminski, *The Right to An Explanation, Explained*, 34 BERKELEY TECH. L.J. 189 (2019); Sonia K. Katyal, *Private Accountability in The Age of Artificial Intelligence*, 66 UCLA L. REV. 54 (2019); Devin R. Desai & Joshua A. Kroll, *Trust But Verify: A Guide to Algorithms & The Law*, 31 HARV. J.L. & TECH. 1 (2018).

for applicants subjected to automated video interviewing by examining extant antidiscrimination laws found in Title VII of the Civil Rights Act, the Americans with Disabilities Act (ADA), privacy law, and the Federal Credit Reporting Act (FCRA). Part III examines what applying a Lex Informatica framework to automated video interviewing might entail. It focuses on the treatment of content, personal information, and the preservation of ownership rights for data collected as part of the automated interviewing process.

II. AUTOMATED VIDEO INTERVIEWING AS AI-ENABLED PHRENOLOGY

This Part discusses the rise of video interviewing as a business practice. It also discusses the phrenological origins of automated video interviewing, the limitations of AI for facial analysis and emotion detection, and what this means for racial exclusion in the workplace.

A. THE RISE OF AUTOMATED VIDEO INTERVIEWING

Video interviewing without the use of artificial intelligence emerged as a field in the early 2000s with two companies: HireVue and Montage.¹⁹ According to VidCruiter CEO Sean Fahey, these companies “invented pre-recorded video interviewing, where people record at home while hiring managers were doing something else.”²⁰ In its nascency, convenience was the driving force behind video interviewing. Employers would provide candidates with a set of standardized questions; candidates would then video record their answers to each question; then employers would review those answers to make hiring decisions. This system meant employers could better compare candidates and get multiple opinions while saving money and time on recruiter travel.²¹ Around the same time, other interview-focused hiring startups were in the works, such as GreenJobInterview which provided one of the first purpose-built, live video interview platforms before the age of Zoom.²²

Since its inception, video interviewing has evolved to include the use of artificial intelligence. Asynchronous interviews recorded and sent via the internet have now become standard practice as opposed to mailing physical tapes. Starting in 2015, HireVue became one of the first to offer AI-based

19. *Where Did Video Hiring Come From and Where Is It Going?*, VIDCRUITER, <https://vidcruiter.com/video-interviewing/history-of-video-interview/#:~:text=In%20HireVue's%20case%2C%20founder%20Mark,managers%20were%20doing%20something%20else.%E2%80%9D> (last visited Nov. 6, 2021).

20. *Id.*

21. HireVue, *The HireVue Story—Mark Newman*, VIMEO (Apr. 26, 2013, 6:03 PM), <https://vimeo.com/64921188>.

22. VIDCRUITER, *supra* note 19.

assessments.²³ HireVue's assessments traditionally used vocal and facial analysis technology, drawing on "[a] database of about 25,000 pieces of facial and linguistic information," to provide recruiters with a measure of a candidate's potential job performance.²⁴ As of 2019, the algorithms assessed factors such as "a candidate's tone of voice, their use of passive or active words, sentence length and the speed they talk," and facial expressions such as "brow furrowing, brow raising, the amount eyes widen or close, lip tightening, chin raising and smiling."²⁵ Although HireVue claims it discontinued use of its facial recognition technology as of 2021,²⁶ it continues to use lingual analysis and there is no formal ban or rule preventing the reimplementation of facial recognition technology for automated hiring systems.²⁷ HireVue's marriage of AI and video interviewing has become entrenched as a standard practice for recruitment. A 2020 study that analyzed the claims and practices of various algorithmic hiring companies found that one-third of the eighteen companies analyzed deployed video-based assessments.²⁸

Video interview adoption on the whole is rising alongside the integration of AI assessments. In 2011, a survey of 506 companies found that 47% were using video interviewing to speed up the hiring process, while another 22% responded they would consider video interviewing as a tool to recruit geographically diverse candidates.²⁹ A 2015 survey of 700 executives found

23. See generally *Our Science: Meet the IO Psychology Team*, HIREVUE, <https://www.hirevue.com/our-science> (last visited Apr. 22, 2021) (noting the use of IO psychology as part of AI-based interview assessments).

24. Ivan Manokha, *How Using Facial Analysis in Job Interviews Could Reinforce Inequality*, PBS NEWS HOUR (Oct. 7, 2019, 3:26 PM), <https://www.pbs.org/newshour/economy/making-sense/how-using-facial-recognition-in-job-interviews-could-reinforce-inequality#:~:text=The%20technology%2C%20developed%20by%20US,are%20videoed%20answering%20identical%20questions.&text=HireVue%20says%20it%20speeds%20up,the%20speed%20of%20information%20processing>.

25. *Id.*

26. See Roy Maurer, *HireVue Discontinues Facial Analysis Screening*, SOC'Y FOR HUM. RES. MGMT. (Feb. 3, 2021), <https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/hirevue-discontinues-facial-analysis-screening.aspx>.

27. Cf. Will Knight, *Job Screening Service Halts Facial Analysis of Applicants*, WIRED (Jan. 12, 2021), <https://www.wired.com/story/job-screening-service-halts-facial-analysis-applicants/> (noting some state statutes and local level ordinances that ban facial recognition).

28. Manish Raghavan, Solon Barocas, Jon Kleinberg & Karen Levy, *Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices*, 2020 CONF. ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY (FAT*) 469, 473 (2020).

29. Heather O'Neill, *Video Interviewing Cuts Costs, but Bias Worries Linger*, WORKFORCE (Oct. 5, 2011), <https://www.workforce.com/news/video-interviewing-cuts-costs-but-bias-worries-linger>.

that 50% were using video interviews to “narrow the candidate pool.”³⁰ Significantly, these statistics report the state of video interviewing *before* AI-based assessments were introduced; recent reports suggest the industry has grown at rapid rates since the integration of this new AI-based assessment technology. As of 2018, 60% of organizations were using video interviews, a number which dramatically spiked in 2020 due to global shutdowns prompted by the COVID-19 pandemic.³¹ A 2020 Gartner HR survey reported that 86% of respondents were turning to new virtual interview technology to facilitate remote hiring.³² Data specific to industry leader HireVue shows that 733 corporations were using the platform as of 2021, the majority of which employed more than 10,000 employees and touted more than \$1 billion a year in revenue.³³ Computer software, health care, retail, and financial services industries ranked among the top users of HireVue’s services.³⁴ The expansive reach of HireVue’s automated video hiring technology as a single platform warrants closer scrutiny. A serious consideration of AI-based video interview technology’s potentially discriminatory effects is necessary given the rapid adoption and scale of video interviewing. This need for scrutiny is heightened by the unproven validity of its AI-based predictions.

Such an examination is especially salient as anecdotal evidence suggests that the corporate frenzy to join the bandwagon of technological hiring comes at the expense of candidates who have the most to lose, such as racial minorities and applicants with disabilities. Even the average job candidate has decried the lack of autonomy and the depersonalization when the hiring decision hinges on AI-based video interview technology. A group of candidates interviewed by the Washington Post shared that they found the video interview process “alienating and dehumanizing.”³⁵ Some candidates

30. See Roy Maurer, *Use of Video Interviewing Continues to Grow*, SOC’Y FOR HUM. RES. MGMT. (Aug. 21, 2015), <https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/use-video-recruiting-grow.aspx>.

31. Nilam Oswal, *The Latest Recruitment Technology Trends and How to Really Use Them*, PC WORLD (Feb. 9, 2018, 4:56 PM), <https://www.pcworld.idg.com.au/article/633219/latest-recruitment-technology-trends-how-really-use-them/>; *Gartner HR Survey Shows 86% of Organizations Are Conducting Virtual Interviews to Hire Candidates During Coronavirus Pandemic*, GARTNER: NEWSROOM (Apr. 30, 2020), <https://www.gartner.com/en/newsroom/press-releases/2020-04-30-gartner-hr-survey-shows-86-of-organizations-are-cond>.

32. GARTNER: NEWSROOM, *supra* note 31.

33. *Companies Using HireVue*, ENLYFT, <https://enlyft.com/tech/products/hirevue#:~:text=We%20have%20data%20on%20733,and%20%3E1000M%20dollars%20in%20revenue> (last visited Apr. 22, 2021).

34. *Id.*

35. Drew Harwell, *A Face-Scanning Algorithm Increasingly Decides Whether You Deserve The Job*, WASH. POST (Nov. 6, 2019, 12:21 PM), <https://www.washingtonpost.com/technology/>

have even begun to distinguish between video interviews and “real” interviews, which they believe are more likely to lead to actual hiring decisions. A college graduate speaking to Slate magazine described feeling disappointed when she realized her interview was a taping to be reviewed by “an A.I. thing” as opposed to a conversation with a real recruiter.³⁶ For some candidates, video interviews have come to represent part of the culling process of automated hiring rather than a meaningful opportunity to prove one’s qualifications.³⁷

For other candidates, the concern around video interview technology runs even deeper. Kat, a software engineering student also interviewed by Slate magazine, noted that video interviewing technology made her “[feel] like [she] was not valued as a human.”³⁸ Also, as a Black woman, her concerns around dehumanization were exacerbated by her recognition that “A.I. is known to perpetuate bias against people of color or fail to recognize them at all.”³⁹ Her friends and other professionals encouraged her to decline video interviews which used AI, which she reported was her plan going forward.⁴⁰ Individuals with disabilities have received the same advice from disability advocates and companies alike who believe video interview algorithms run the risk of screening out candidates with disabilities.⁴¹

Although HireVue and some other video interview platforms claim to mitigate bias in their hiring systems, concerns for race, disability, and other types of discrimination do not seem unfounded. Not all companies engage in algorithm de-biasing efforts, and for those that do, it is not clear that those mitigation efforts are effective for catching all manifestations of bias in hiring algorithms.⁴² Given the presence of instances like Amazon’s proprietary screening tool that systematically discriminated against women,⁴³ there is ample evidence of AI-based hiring technologies perpetuating discrimination in the past, and it is thus critical to identify the shortcomings of existing

2019/10/22/ai-hiring-face-scanning-algorithm-increasingly-decides-whether-you-deserve-job/.

36. Rachel Withers, *Should Robots Be Conducting Job Interviews?*, SLATE (Oct. 5, 2020, 9:00 AM), <https://slate.com/technology/2020/10/artificial-intelligence-job-interviews.html>.

37. Ajunwa, *supra* note 7, at 622–23.

38. Withers, *supra* note 36.

39. *Id.*

40. *Id.*

41. Jim Fruchterman & Joan Mellea, *Expanding Employment Success for People with Disabilities*, BENETECH 1, 3 (Nov. 2018), <https://benetech.org/wp-content/uploads/2018/11/Tech-and-Disability-Employment-Report-November-2018.pdf>.

42. See Raghavan et al., *supra* note 28, at 477–78 (noting that simply using outcome based de-biasing to comply with the Title VII 4/5 rule may not effectively capture all forms of algorithmic discrimination).

43. See Dastin, *supra* note 15.

legislation in order to design a more robust, protective regulatory regime for automated video interviewing.

B. THE PHRENOLOGICAL ORIGINS OF AUTOMATED VIDEO INTERVIEWS

The problems with automated video interviewing are manifold. To fully comprehend the contours of the problem, a ground level examination of the origins of automated video interviewing is necessary. The premise that emotions or character may be surmised from the human face or facial expressions is part of the theoretical scaffolding for automated video interviewing. Scholars like Kate Crawford have characterized the thinking behind this premise as a “phrenological impulse”—the desire to entertain assumptions about an individual’s emotions and character merely from external appearances.⁴⁴ Yet, there remains no scientific consensus that artificial intelligence systems are capable of accurately interpreting human emotions from facial expressions. In fact, one psychological study, conducted in 2019, found no strong evidence that artificial intelligence could accurately ascertain a person’s emotions solely from facial expressions.⁴⁵ Yet, despite the lack of evidence to support the efficacy of automated video interviewing, this type of recruitment technology is rapidly becoming entrenched as part of hiring and recruitment efforts.⁴⁶

1. *The History of Phrenology*

Starting roughly in the 1800s, phrenology was the brainchild of German physiologist Dr. Franz Joseph Gall.⁴⁷ Gall, a relatively “handsome man” who himself had a “broad ‘noble head,’ ” sought to transform the then somewhat informal field of psychology, the study of the human mind and its functions, into a true science.⁴⁸ Gall rejected the traditional philosophical grounds for understanding the human brain, instead turning to what he considered to be concrete scientific data in order to create his own scientific hypothesis for

44. Kate Crawford, *Time To Regulate AI That Interprets Human Emotions*, NATURE (Apr. 6, 2021), https://www.nature.com/articles/d41586-021-00868-5?utm_source=twitter&utm_medium=social&utm_content=organic&utm_campaign=NGMT_USG_JC01_GL_Nature.

45. Lisa Feldman Barrett, Ralph Adolphs, Stacy Marsella, Aleix M. Martinez & Seth D. Pollak, *Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements*, 20 PSYCH. SCI. PUB. INT. 1, 46–47 (2019).

46. See, e.g., *HireVue Ranked A Fastest Growing Company on Deloitte’s 2018 Technology Fast 500*, HIREVUE (Nov. 15, 2018), <https://www.hirevue.com/press-release/deloitte-2018-technology-fast-500-hirevue-ranked-fastest-growing-company> (demonstrating the reach of AI interviewing technology).

47. Pierre Schlag, *Commentary: Law & Phrenology*, 110 HARV. L. REV. 877, 878 (1997).

48. *Id.* (quoting NELSON SIZER, FORTY YEARS IN PHRENOLOGY 380–81 (1888)).

inner workings of the mind—a field that would come to be known as phrenology.⁴⁹ Gall began his studies by observing animal and human behavior. He studied social structures, from “family life” to “jails and asylums,” intending to identify mankind’s “fundamental faculties” through an analysis of objective data.⁵⁰ At the center of Gall’s theory was the cerebral localization hypothesis.⁵¹ Gall believed that the brain was divided into separate essential organs, each of which served a unique and essential function.⁵² These functions extended not only to essential intellectual skills but also genetically coded for moral and emotional capabilities.⁵³ Thus, according to Gall’s hypothesis, one’s individual behavior and intellect was directly related to the development and structure of one’s physical brain anatomy. Gall in part rested his argument on an appeal to the specialization seen throughout nature: just as eyes serve a specialized function, just as ears serve a predetermined purpose, it followed logically, for Gall, that different regions of the brain would follow suit.⁵⁴ Gall based many of his “objective” scientific observations on anecdotal evidence. For example, Gall decided that those who “learn by heart” always feature “large prominent eyes.”⁵⁵ Gall concluded that there was a similar pattern with other physical traits corresponding to mental capacities. According to Gall, these observations soon led him to believe with certainty “that the difference in the form of heads is occasioned by the difference in the form of the brains.”⁵⁶ Also, these differences presented themselves by size. Any region of the brain that was more developed in an individual would be larger in size and would also feature more prominently in outward appearance.⁵⁷

Based upon his cerebral localization hypothesis, Gall conducted further pseudoscientific tests to arrive at a construction of no less than “twenty-seven fundamental faculties” located in different regions of the skull that explained human behavior.⁵⁸ Gall relied on “empirical observation” of numerous

49. *Id.*

50. *Id.* at 879.

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. *Id.* at 880.

56. *Id.*

57. *Id.*

58. *Id.* (enumerating Gall’s list of 27 faculties as follows: Amativeness, Philoprogenitiveness, Adhesiveness, Combativeness, Destructiveness, Secretiveness, Acquisitiveness, Self-Esteem, Love of Approbation, Cautiousness, Eventuality [and Individuality], Locality, Form, Vocabulary, Language, Coloring, Tune, Number, Constructiveness, Comparison, Causality, Wit, Ideality, Benevolence, Imitation, Veneration, & Firmness).

individuals, depending heavily on correlation to associate some specific traits with particular regions of the brain.⁵⁹ After identifying where they deemed particular faculties to reside in the brain, Gall and other phrenologists made value judgments concerning what each faculty meant for individual behaviors and personalities. Phrenologists took great care to isolate various faculties from others, describing the detailed nature of each region of the brain and the nuanced observations and implications used to determine each region's independent relationship to behavior.⁶⁰ Building on Gall's work, Dr. Johann Spurzheim observed that the faculties Gall identified could be further divided into feelings and intellect, with subdivisions that created a detailed hierarchy and organizational framework within which to interpret phrenological findings.⁶¹

Although the study of phrenology began in the late eighteenth century, it did not gain prominence until 1815 when a review in the *Edinburgh Review*, a respected intellectual magazine of the time, condemned the newfound science as “utterly destitute of every qualification necessary for the conduct of a philosophical investigation.”⁶² Middle-class individuals, fascinated by this new and previously unknown theory, however, began to follow phrenologists' findings despite backlash from the scientific community.⁶³ In the eyes of the public at that time, Spurzheim had successfully refuted the *Edinburgh Review's* critiques, and in 1820, the first phrenological society was formed in Edinburgh, Scotland.⁶⁴ Phrenology's popularity became a wave that swept from Britain to America. In 1838, the first meeting of the Phrenological Association convened; it was modeled on respected scientific associations which had excluded phrenology from its ranks.⁶⁵ In phrenology, the “enthusiastic and the arrogant” found a “scientific” justification for personally held beliefs, from Christians to radicals and racists.⁶⁶ The American “phrenological Fowlers” were a group of phrenology advocates who gave lectures, established institutions across the world, published new research, and even read heads for a fee.⁶⁷ By 1844, the Fowlers' publishing house was distributing phrenological research and

59. *Id.*

60. *Id.* at 882.

61. *Id.* at 883.

62. John van Wyhe, *Ridiculing Phrenology: “This Persecuted Science”*, THE HIST. PHRENOLOGY ON THE WEB, <http://www.historyofphrenology.org.uk/ridicule.htm> (last visited Jan. 4, 2022).

63. John van Wyhe, *Overview*, THE HIST. PHRENOLOGY ON THE WEB, <http://www.historyofphrenology.org.uk/overview.htm> (last visited Jan. 4, 2022).

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.*

propaganda nationwide.⁶⁸ Fowler philosophy, spearheaded by Lorenzo Niles Fowler and Samuel R. Wells, based their version of phrenology on the theories of George Combe.⁶⁹ Though many original phrenologists viewed the Fowlers' brand of phrenology as a deviated form, it was this brand that embedded itself in American social and legal institutions and which persisted despite scientific invalidation.⁷⁰

2. *Phrenology in Law and Society*

Phrenology in America embedded itself in both fashionable and legal society, no doubt thanks to the Fowlers' work. In 1873, writer Mark Twain underwent a secret phrenological examination, wherein a phrenologist determined he had no sense of humor; interestingly, a few months later when Twain returned and publicly announced his well-known name, the phrenologist discovered Twain's skull did in fact house an impressive bump of humor.⁷¹ Although inconsistencies such as those identified during Twain's encounter were well known during the height of phrenology's popularity, public opinion far outweighed scientific criticisms. Workplace evaluations and screening decisions deployed phrenology, with George Combe himself stating he "would never employ a clerk who had not a large coronal region."⁷² Similar to many personality tests of the early twentieth century, employers occasionally used phrenology to determine an individual's suitability for a given career;⁷³ indeed, some employers would include particular phrenological profiles in their job solicitations.⁷⁴ For example, in 1912, a phrenological evaluation of a seven-year-old suggested she was best suited for a career in medicine or teaching.⁷⁵

Phrenology also made its way into the American legal system: it informed theories of criminal law reform, it was a method by which jurists evaluated an individual's culpability, and it was critically used as a "mitigating factor" during criminal sentencing.⁷⁶ Phrenological evaluations were used to determine who

68. *Id.*

69. *Id.*

70. *Id.*

71. Amanda C. Pustilnik, *Violence on The Brain: A Critique of Neuroscience in Criminal Law*, 44 WAKE FOREST L. REV. 183, 191 (2009).

72. Olivia Goldhill, *Centuries Before Myers-Briggs, Workplace Personalities Were Assessed Using Skull Measurements*, QUARTZ AT WORK (Dec. 29, 2017), <https://qz.com/work/1168283/centuries-before-myers-briggs-workplace-personalities-were-assessed-using-phrenology/>.

73. *Id.*

74. Minna Scherlinder Morse, *Facing a Bumpy History*, SMITHSONIAN MAG. (Oct. 1997), <https://www.smithsonianmag.com/history/facing-a-bumpy-history-144497373/>.

75. Goldhill, *supra* note 72.

76. Pustilnik, *supra* note 71, at 192–93.

may be at risk of committing a crime; some police departments used phrenology to typify criminals and arrest them, even in the absence of any evidence a crime had been committed.⁷⁷ Even judges relied on phrenological evidence as fact in official judgments. In the 1853 murder trial *Farrer v. State*, the Ohio Supreme Court relied on phrenological evaluation to determine whether a housekeeper could be held liable for poisoning a youth. The judge presiding over the case ruled that the housekeeper was “remarkably ugly,” thus it was evident that she was both “criminally insane” and subject to “murderous impulses.”⁷⁸ In 1840, a judge stated from the bench that “‘no man . . . would dispute that the brain . . . consists of distinct organs, each having a distinct function, and that power of function is influenced by organic size.’”⁷⁹ Phrenology even influenced the M’Naghten test for insanity, which assumes that an individual’s “ability to know right from wrong” is distinct from any mental disease they may suffer.⁸⁰ This distinction was erroneously rooted in phrenology’s theory of separate, individually functioning mental organs; yet it nevertheless persisted in case law all the way until 1966—well after phrenology had fallen out of use.⁸¹

By the 1950s, the field of phrenology was all but dead. Its demise began nearly as soon as its success. In 1838, at the same time the first phrenological society was called to order, scientists already had evidence that the brain did not actually house enough separate regions to allow each major personality trait its own organ.⁸² In fact, evidence at that time increasingly suggested that many parts of the brain must work in tandem to function.⁸³ Eventually, scientists also came to realize that brain size had little to no correlation with intelligence or efficiency.⁸⁴ Thus, for much of phrenology’s rise there was growing evidence of its invalidity.

Despite these challenges, the practice of phrenology persevered for over a century, embedded in social institutions and common thought. By 1888, the theory was so ingrained that the editors of *Encyclopedia Britannica* felt the need to publish a seven-page essay to refute the theory.⁸⁵ Thus, it was not so much scientific evidence alone that finally led society to cast phrenology aside as

77. *Id.* at 192.

78. *Id.* at 193–194.

79. *Id.* at 194.

80. *Id.* at 193.

81. *Id.*

82. *Id.* at 194.

83. *Id.*

84. *Id.*

85. Morse, *supra* note 74.

phrenology had never truly even been classified as a science.⁸⁶ It was instead a combination of changing social theories and norms paired with scientific evidence that resulted in genuine change.⁸⁷ Simply put, phrenology became “unfashionable.”⁸⁸ As Freudian psychoanalysis gained popularity in the early 1900s, people began to abandon the theory of fixed traits in favor of the more intriguing and mysterious influence of the unconscious mind.⁸⁹ Although the field of phrenology itself was eventually associated with “zealous extremists,” some of its influences lived on.⁹⁰ In the early twentieth century, the spirit of phrenology gave rise to the racially charged anthropological theory that Europeans were superior to other humans based on the shape and size of their skulls.⁹¹ Advocates for this spin-off movement included Paul Broca, who went on to found the Anthropological Society in Paris circa 1859.⁹²

3. *Phrenology and AI*

As the pseudoscience of phrenology fell into disuse, its influence did not merely cease. Rather, its core ideologies evolved into new, more fashionable theories. Phrenology was based on the fundamental belief that human behavior is innate—that an individual is born with certain set behavioral tendencies and capabilities.⁹³ Thus, one conclusion is that, at its core, phrenology presupposes human behavior as quantifiable. Phrenology presupposes that a limited number of behavioral traits exist and that the prevalence of such traits in an individual was directly proportional to their physical characteristics.⁹⁴ Franz Gall had sought to create a system wherein individuals could be objectively measured through quantifiable observations that would allow for useful systematic comparison. Gall’s methods were of course flawed.⁹⁵ He based his science on judgments derived from normative comparisons and perceived value.⁹⁶ Although Gall’s motivation was to create an objective study of the human mind, the result was a theory that was at best pseudoscientific and, at worst, a subjective social tool used to reinforce a static social hierarchy and rationalize class inequality.⁹⁷ These ideologies,

86. van Wyhe, *supra* note 63.

87. Pustilnik, *supra* note 71, at 194.

88. van Wyhe, *supra* note 63.

89. Pustilnik, *supra* note 71, at 194.

90. van Wyhe, *supra* note 63.

91. *Id.*

92. *Id.*

93. Schlag, *supra* note 47, at 879.

94. *Id.*

95. *Id.*

96. *Id.*

97. Goldhill, *supra* note 72.

motivations, and social implications did not disappear when phrenology fell out of use.

The ideological goal to objectively understand human behavior morphed into the well-respected field of psychology, which has experienced its own evolutions over the past century. Phrenology (1840s) was subsumed into the science of behaviorism (1920s), which sought to understand human motivation through observable behavior as opposed to observable physical features.⁹⁸ Cognitive psychology replaced behaviorism (1950s), which shifted focus from observable external behavior to observable brain functions in order to understand human traits such as perception, memory, problem-solving, and intelligence.⁹⁹ While the scientific evidence has shifted and methods of scientific evidence have improved, there remain some parallels between phrenological theory and cognitive psychology's focus on the brain's inner structures.¹⁰⁰

At the turn of the twenty-first century, a new product burst onto an already booming technology scene with the promise to improve efficiency in the hiring process: the digital interview.¹⁰¹ The digital interview initially presented a simple concept: allow individuals to access interview questions at home, prerecord their response, and save companies valuable time and resources.¹⁰² However, digital interview techniques have evolved into the present day automated video interviewing systems that do not merely passively record a candidate's response.¹⁰³ Rather, the systems are often the intermediate arbiters of the candidate's character and job suitability.¹⁰⁴ Today, the most popular and widely used of these technologies is HireVue, ranked one of the 500 fastest growing technology companies in 2018.¹⁰⁵ Starting in 2013, HireVue began using AI to enhance the video interview process.¹⁰⁶ HireVue's systems measure candidates' body language, tone, key words, and even, previously, facial expressions; the results come in the form of a single "employability score,"

98. Kendra Cherry, *The Origins of Psychology*, VERYWELLMIND (June 25, 2020), <https://www.verywellmind.com/a-brief-history-of-psychology-through-the-years-2795245>.

99. *Id.*

100. *Id.*

101. VIDCRUITER, *supra* note 19.

102. *Id.*

103. Richard Feloni, *I Tried the Software that Uses AI to Scan 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://www.businessinsider.com/hirevue-ai-powered-job-interview-platform-2017-8> (containing information that demonstrates that the hiring software does evaluate applicants).

104. *Id.*

105. HIREVUE, *supra* note 46.

106. Feloni, *supra* note 103.

which is then ranked against other applicants.¹⁰⁷ HireVue claims its technology removes bias from the hiring process by applying a single, objective algorithm to all candidates, allowing for a fair evaluation.¹⁰⁸ Although in January of 2021, after criticism, HireVue announced that it will halt the use of facial analysis, it still retains the use of intonation and body language to make hiring decisions.¹⁰⁹ Thus, some might consider HireVue’s system an iteration of phrenology.

Yet, in the same way that phrenology “scientifically” assessed individuals based on normative, anecdotal observations, video interview technology like HireVue’s measures candidates’ responses against a normative sample of individuals who are perceived to be successful at a given job. Companies such as HireVue collect “training data” in the form of interviews and performance records from existing high-performing employees at a given company.¹¹⁰ As training data, the traits exhibited by top performers are set as the variables that the automated systems will use to screen candidates. These traits are often nuanced—for example, better enunciation or simply leaning forward on the table could be traits that correlate to successful salespeople at a given company, rendering these as variables that the algorithm rewards.¹¹¹ This type of training data reflects one of the most basic logical fallacies: correlation is not causation.

Furthermore, basing an employment decision on correlations may undermine the equal opportunity principle. For example, Amazon took a candidate screening technology it had developed out of service once it came to light that the technology disproportionately ranked men higher than women.¹¹² One reason for this was that the technology, which operated on correlations, likely compared candidates to the traits commonly shared by top performers, and the top performers were overwhelmingly men. This is not because men were more competent but simply the result of past biases in recruitment that gave men a historical advantage. In this case, the averred objective scientific measurement was in actuality algorithmic processes reflecting societal biases—as the pseudoscience of phrenology had previously done.

107. Angela Chen, *The AI Hiring Industry Is Under Scrutiny—But It’ll Be Hard to Fix*, MIT TECH. REV. (Nov. 7, 2019), <https://www.technologyreview.com/2019/11/07/75194/hirevue-ai-automated-hiring-discrimination-ftc-epic-bias/>.

108. Feloni, *supra* note 103.

109. Knight, *supra* note 27.

110. Alex Engler, *For Some Employment Algorithms, Disability Discrimination by Default*, BROOKINGS INST. (Oct. 31, 2019), <https://www.brookings.edu/blog/techtank/2019/10/31/for-some-employment-algorithms-disability-discrimination-by-default/>.

111. *Id.*

112. Dastin, *supra* note 15.

Akin to how phrenology sought to quantify human character through observable, physical traits, video interview technologies also seek to quantify and objectively understand human behavior as it relates to job success. An inherent underlying assumption of these technologies is that there exist observable, physical manifestations that give insight into the character and behavioral traits that define a successful individual. Video interviewing technology is purportedly motivated by objectivity,¹¹³ yet it ranks candidates based on judgments rooted in normative comparisons. The automated video interviewing algorithms are trained to search for certain traits deemed to be valuable, but these normative conclusions are based on samples of existing employees, and these samples are not random and may not be representative.¹¹⁴ Yet, society has uncritically embraced video interviewing technology much in the same way that it embraced phrenology. As of 2017, HireVue alone boasted more than 600 clients, many of them multinational corporations such as Unilever, Goldman Sachs, and Under Armor.¹¹⁵ Unfortunately, just like phrenological thinkers of the eighteenth century, early adopters of automated video interviewing have largely failed to consider the scientifically shaky foundations undergirding video interviewing technologies.

C. THE RACIAL IMPACT OF FACIAL AND EMOTION ANALYSIS

Although companies like HireVue claim to no longer use facial recognition,¹¹⁶ there have been no independent audits to substantiate such claims.¹¹⁷ Thus, it remains urgent to understand and redress the racial impact of both the facial and emotion analysis used for automated video interviews. In *Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices*, Raghavan and his coauthors point to “[a] wave of studies [which have] shown that several commercially available facial analysis techniques suffer from disparities in error rates across gender and racial lines.”¹¹⁸ In 2018, Joy Buolamwini and Timnit

113. Feloni, *supra* note 103.

114. *See id.*

115. *Id.*

116. *Hirevue Leads the Industry with Commitment to Transparent and Ethical Use of AI in Hiring*, HIREVUE (Jan. 12, 2021), <https://www.hirevue.com/press-release/hirevue-leads-the-industry-with-commitment-to-transparent-and-ethical-use-of-ai-in-hiring> (“Independently, early in 2020, HireVue proactively removed the visual analysis component from all of its new assessments. HireVue’s internal research demonstrated that recent advances in natural language processing had significantly increased the predictive power of language. With these advances, visual analysis no longer significantly added value to assessments.”).

117. Ajunwa, *supra* note 7, at 672 (noting that HireVue’s audit was conducted by a company that HireVue had hired, and after the audit was completed, there were still “many questions [left] unanswered”).

118. Raghavan, *supra* note 28, at 475.

Gebru examined the performance of facial analysis algorithms across four “intersectional subgroups” of males or females featuring lighter or darker skin.¹¹⁹ Buolamwini and Gebru found that algorithms designed to identify gender performed better on male faces as opposed to female and performed better on light faces as opposed to dark. Darker females were also the most misclassified of all groups.¹²⁰ This troubling finding suggests that the facial analysis software that video interview algorithms employ may be less accurate when identifying job candidates of color and women.

This finding is further corroborated by Lauren Rhue, who found that the emotion analysis feature of two facial recognition algorithms “interprets emotions differently based on the person’s race.”¹²¹ One recognition software interpreted Black individuals as angrier than White individuals regardless of whether the individual was smiling; the other platform viewed Black individuals as more contemptuous than White individuals when their face featured an “ambiguous” expression, though “[a]s the players’ smile widens, the disparity disappears.”¹²² Thus, not only is facial recognition technology less accurate at identifying women and people with darker skin tones, it is also less accurate at interpreting emotions that individuals with dark skin express. Given video interviewing’s reliance on facial and emotion recognition technology, this disparity is troubling. In 2019, HireVue claimed their algorithm assessed such nuanced traits as “brow furrowing, brow raising, the amount eyes widen or close, lip tightening, chin raising and smiling.”¹²³ However, AI is clearly unable to accurately identify and assess the meanings of these subtle facial movements for all groups. Thus, by building algorithms to rely on this inaccurate technology, video interview platforms are nearly guaranteeing discriminatory results.

For AI scholar Luke Stark, these discriminatory outcomes are not merely a byproduct of flawed design; rather, the racialization of the human face is integral to the mission of facial analysis.¹²⁴ By “attach[ing] numerical values to the human face,” humans are necessarily being quantified and judged by classifiable visual signs—race foremost of all.¹²⁵ Thus, for Stark, facial

119. Joy Buolamwini & Timnit Gebru, *Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*, 81 PROC. MACH. LEARNING RSCH. 1, 2 (2018).

120. *Id.* at 8.

121. Lauren Rhue, *Racial Influence on Automated Perceptions of Emotions*, RACE, AI, & EMOTIONS 1, 1 (2018).

122. *Id.*

123. Manokha, *supra* note 24.

124. See Luke Stark, *Facial Recognition Is the Plutonium of AI*, 25 XRDS: CROSSROADS 50, 53 (2019).

125. *Id.* at 52.

recognition technologies “both create and reinforce discredited categorizations around gender and race.”¹²⁶ It is this observation that leads Stark to boldly claim “facial recognition is the plutonium of AI . . . anathema to the health of human society, and [something that should be] heavily restricted as result.”¹²⁷ Legal scholars like Woodrow Hartzog have also called for a wide ban on facial recognition technologies.¹²⁸

Interviews are the gateway to work and earning a livelihood, a fundamental human right.¹²⁹ Incorporating facial and emotion recognition technology into the interview process means the interview process could become tainted by racialized bias. To date, millions of video interviews relying on facial and emotion analysis have been conducted.¹³⁰ Although some platforms have claimed to discontinue the use of facial recognition technology,¹³¹ many automated systems still claim to act as emotion recognition systems.

D. THE PSEUDOSCIENCE OF EMOTION RECOGNITION

As succinctly put in *Emotional Entanglement: China’s Emotion Recognition Market and Its Implications for Human Rights*—a recent report on the background, uses, and ethical issues that underlie the use of emotion recognition technologies in China’s authoritarian state—“[t]wo fundamental assumptions undergird emotion recognition technologies: that it is possible to gauge a person’s inner emotions from their external expressions, and that such inner emotions are both discrete [that is quantifiable] and uniformly expressed across the world.”¹³² These core principles have historical precedent. In an examination of modern emotion-recognition technology, Rich Firth-Godbehere asserts that the roots of universal emotion theories trace all the way back to the Greek philosopher Aristotle and seventeenth century artist Charles Le Brun, a proponent of the controversial and since discredited racist

126. *Id.*

127. *Id.*

128. See Evan Selinger & Woodrow Hartzog, *The Inconsistency of Facial Surveillance*, 66 LOY. L. REV. 101, 105 (2019); see also CLIC Faculty, *Professor Woodrow Hartzog Calls for a Ban on Facial Recognition Technology in New Publication*, NORTHEASTERN: CLIC (Apr. 14, 2020), <https://www.northeastern.edu/clic/2020/04/>.

129. See G.A. Res. 217 (III) A, Universal Declaration of Human Rights, art. 23(1) (Dec. 10, 1948) (“Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.”).

130. See Manokha, *supra* note 24 (discussing HireVue’s 2019 claim that their algorithm assessed such nuanced traits as “brow furrowing, brow raising, the amount eyes widen or close, lip tightening, chin raising and smiling.”); see also Maurer, *supra* note 26.

131. See Maurer, *supra* note 26.

132. ARTICLE 19, ENTANGLEMENT: CHINA’S EMOTION RECOGNITION MARKET AND ITS IMPLICATIONS FOR HUMAN RIGHTS 15 (2021), <https://www.article19.org/wp-content/uploads/2021/01/ER-Tech-China-Report.pdf>.

field of physiognomy.¹³³ In the late nineteenth century, Charles Darwin sought to marry theories of universal emotions with the science of his day. Darwin published *The Expression of the Emotions in Man and Animals* in 1872, an offshoot of evolutionary theory that suggested “some kind of common evolutionary ancestor” explained the parallels between “some instinctual actions” both animals and humans express.¹³⁴ However, it was not Darwin but mid-twentieth century psychologist Paul Ekman whose research would lay the groundwork for emotion recognition AI.

In the 1960s, Ekman laid the groundwork for “Basic Emotion Theory (BET)” around two primary theories.¹³⁵ Firstly, Ekman, working in conjunction with scientist Silvan Tomkins and Wallace Friesen, theorized that there are “six basic emotions: happiness, anger, sadness, disgust, surprise, and fear.”¹³⁶ Conducting studies with a remote civilization in Papua New Guinea, Ekman determined these emotions are consistent “across cultures.”¹³⁷ Ekman’s second theory concerned “micro expressions.” He believed that not only are basic emotions universal but also that minute expressions, which “occur briefly in response to stimuli, are signs of ‘involuntary emotional leakage [which] exposes a person’s true emotions.’”¹³⁸

According to AI scholar Kate Crawford, this is the pseudoscience underlying today’s emotion recognition AI.¹³⁹ Crawford argues that the marriage of Ekman’s theories with computer science was one of convenience: “the six emotions Ekman described fit perfectly into the model of the emerging field of computer vision.”¹⁴⁰ Ekman’s theory was attractive because it allowed emotions to be quantified and, in turn, allowed the quantification of emotions to be “standardized and automated at scale.”¹⁴¹ However, this union wholly ignored the mounting questions regarding the validity and accuracy of Ekman’s theories.

133. Rich Firth-Godbehere, *Silicon Valley Thinks Everyone Feels the Same Six Emotions*, NEXT (Sept. 5, 2018), <https://qz.com/1392130/silicon-valley-thinks-everyone-feels-the-same-six-emotions/>

134. *Id.*

135. ARTICLE 19, *supra* note 132, at 15.

136. Firth-Godbehere, *supra* note 133.

137. ARTICLE 19, *supra* note 132, at 15.

138. *Id.*

139. Crawford, *supra* note 44.

140. *Id.*

141. *Id.*

Since the twentieth century, scientists had already begun to suspect that theories of universal emotion expression were inaccurate.¹⁴² Anthropologist Margaret Mead was an early skeptic of this idea. Researching the people of a remote Samoan island in the 1920s, Mead concluded “that fundamental human experiences—including emotions—varied from culture to culture.”¹⁴³ Ekman’s New Guinea studies appeared to challenge Mead’s conclusions. Yet, his research methods were later called into question. For one, the fact that it was later discovered that the subjects of Ekman’s study had in actuality previously interacted with Western researchers before, called into question the extent to which they were truly culturally isolated.¹⁴⁴ Moreover, Ekman’s use of translators and photographs of exaggerated faces also called into question the accuracy of his findings; more recent research shows that emotions are harder to recognize when less exaggerated.¹⁴⁵ Given Ekman’s flawed methodology, it is not clear his findings actually challenge Mead’s conclusions concerning cultural differences in human emotional expression.

Ekman’s theory of micro expressions has also been proven “to be both unreliable (due to [the] brevity and infrequency [of micro expressions]) and discriminatory.”¹⁴⁶ This finding is particularly discrediting for video interviewing technology, which is known to rely on facial analysis that analyzes minute facial movements.¹⁴⁷ Another study found that facial expressions and the universal emotions that supposedly underlie them are “only weakly associated” at best.¹⁴⁸ Furthermore, in perhaps one of the more compelling recent studies, *Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements*, Lisa Feldman Barrett and her coauthors, “systematic[ally] review” evidence concerning emotion recognition to ultimately conclude that “how people communicate anger, disgust, fear,

142. See generally Lisa Feldman Barrett, *Are Emotions Natural Kinds?*, 1 PERSPS. ON PSYCHOL. SCI. 28, (2006) (discussing several studies disproving the universality of facial expressions as representing emotions).

143. Firth-Godbehere, *supra* note 133.

144. *Id.*

145. *Id.* (citing Copernicus Center for Interdisciplinary Studies, *Language, Emotion, and Facial Expression—J. Russell*, YOUTUBE (Nov. 26, 2011), <https://www.youtube.com/watch?v=oS1ZtvrgDLM>).

146. ARTICLE 19, *supra* note 132, at 16 (citing Andrea Korte, *Facial Recognition Technology Cannot Read Emotions, Scientists Say*, AM. ASS’N FOR THE ADVANCEMENT OF SCI. (Feb. 17, 2020), <https://www.aaas.org/news/facial-recognition-technology-cannot-read-emotions-scientists-say>).

147. See Manokha, *supra* note 24 (discussing video interview platform HireVue’s facial analysis technology, which formerly considered facial movements such as “brow furrowing, brow raising, the amount eyes widen or close, lip tightening, chin raising and smiling”).

148. ARTICLE 19, *supra* note 132, at 16 (citing J.A. RUSSELL & J.M. FERNÁNDEZ-DOLS, COHERENCE BETWEEN EMOTIONS AND FACIAL EXPRESSIONS (2017)).

happiness, sadness, and surprise varies substantially across cultures, situations, and even across people within a single situation.”¹⁴⁹ As Barrett and her coauthors note, emotion recognition literature is lacking context-specific studies of facial expressions.¹⁵⁰ They propose that the unknowns around facial recognition technology should cause scientists to “step back from what we think we know about reading emotions in faces.”¹⁵¹ This warning should also be heeded by automated video interview system creators. Essentially, Barrett and her coauthors’ work invalidates automated video interviewing systems, not merely on the idea of biased algorithms or biased training data but on the premise that the entire field of science on which automated video interviewing is based is misleading. According to the authors:

[T]ech companies may well be asking a question that is fundamentally wrong. Efforts to simply ‘read out’ people’s internal states from an analysis of their facial movements alone, without considering various aspects of context, are at best incomplete and at worst entirely lack validity, no matter how sophisticated the computational algorithms.¹⁵²

III. LIMITATIONS IN LEGAL PROTECTIONS FOR APPLICANTS

Given the deeply flawed science behind automated video interviewing and the growing evidence that its use may perpetuate racial and other biases in hiring, one question remains: what legal protections, if any, are afforded to the job candidate who encounters automated video interviewing as a part of their job search? In the Sections below, the Article examines the extant legal protections available to job applicants and parse their limitations apropos automated video interviewing.

A. TITLE VII

Title VII of the Civil Rights Act of 1964 “prohibits employers from discriminating against employees and applicants for employment on the bases of race, color, religion, national origin, and sex.”¹⁵³ Video interviewing algorithms may run afoul of Title VII if algorithmic decision-making is found to discriminate against candidates across any of these protected classes. For

149. Barrett et al., *supra* note 45, at 1.

150. *Id.* at 48.

151. *Id.* at 51.

152. *Id.* at 48.

153. Jennifer Issacs, *Proving Title VII Discrimination in 2019*, AM. BAR ASS’N, https://www.americanbar.org/groups/young_lawyers/projects/no-limits/proving-title-vii-discrimination-in-2019/ (last visited Mar. 12, 2021).

example, algorithms relying on biased or incomplete training data may produce discriminatory hiring decisions that penalize those who do not reflect the White male majority that has historically held an advantage in the workplace.

A Title VII claim brought against a discriminatory video interview algorithm would likely follow the path of a disparate impact claim as opposed to disparate treatment. Intent is essential to disparate treatment claims, and it would be particularly difficult to prove intent when the machine acts as an opaque intermediary between employers and candidates.¹⁵⁴ Intent may be especially difficult to prove in cases where video interview tools take steps to screen out bias on the basis of protected classes. Even if an employee could prove intent and harm under disparate treatment theory, an employer may still then claim a legitimate, nondiscriminatory alternative reason for its action.¹⁵⁵ Plausible alternatives include a significant correlation between the tool in question and job performance.¹⁵⁶

Unfortunately, disparate impact theory offers only a slightly better protection. In McKenzie Raub's Title VII analysis of video interview algorithms in *Bots, Bias and Big Data: Artificial Intelligence, Algorithmic Bias and Disparate Impact Liability*, she suggests that plaintiffs may have issues establishing a prima facie case under disparate impact theory "when the discrimination is the result of incomplete, incorrect, or non-representative data . . . [or data that] fails to represent groups in accurate proportions."¹⁵⁷ According to Raub, statistically proving discrimination, as required for a prima facie case, could be particularly complicated considering "segments of protected classes could be excluded from employment opportunities because of a lack of access to the required technology to participate in the hiring practices that use artificial intelligence."¹⁵⁸ Applying this insight specifically to video-based hiring, a minority applicant opt-out bias may mean that individuals who try to bring an adverse impact claim do not have enough peers who have used the technology to effectively prove their discrimination was statistical

154. See Stephanie Bornstein, *Antidiscriminatory Algorithms*, 70 ALA. L. REV. 519, 524 (2018) ("Worse still, current scholarship suggests, the apparent neutrality of algorithms and the 'black box' nature of machine learning make this hiring trend a new way of doing business that could be unreachable by existing antidiscrimination law."); McKenzie Raub, *Bots, Bias and Big Data: Artificial Intelligence, Algorithmic Bias and Disparate Impact Liability in Hiring Practices*, 71 ARK. L. REV. 529, 550 n.174 (2018).

155. See Jennifer Jolly-Ryan, *Have a Job to Get a Job: Disparate Treatment and Disparate Impact of the 'Currently Employed' Requirement*, 18 MICH. J. RACE & L. 189, 201 (2012).

156. See Sullivan, *supra* note 7, at 420–21; Sandra F. Sperino, *Disparate Impact of Negative Impact: Future of Non-Intentional Discrimination Claims Brought by the Elderly*, 13 ELDER L.J. 339, 358 (2005).

157. Raub, *supra* note 154, at 547–48.

158. *Id.*

rather than circumstantial. Thus, although a discriminatory video interview algorithm may in fact have an adverse impact, a lack of aggregated evidence may make it difficult for employees to establish a case for protection under Title VII.

Notably, other scholars take a slightly different approach from Raub on this issue by placing the onus on employers to prevent algorithmic discrimination.¹⁵⁹ As those scholars argue, “employment antidiscrimination law imposes an affirmative duty of care on employers to ensure that they are avoiding practices that would constrain equal opportunity in employment.”¹⁶⁰ Calling on the work of other legal scholars, I have argued that this duty, emanating from Title VII protections, would entail an “auditing imperative” for video interviewing.¹⁶¹ Such an imperative would require employers to proactively audit their algorithms for any instance of bias, which would in turn “enable litigation by generating data to serve as statistical evidence of disparate impact or by discovering practices that could be considered *discrimination per se*.”¹⁶² An auditing imperative could therefore aid plaintiffs in bringing an effective prima facie case under Title VII.

However, even if a job applicant can prove a prima facie case, it may be relatively easy for employers to establish that their criteria for the algorithmic models in question are job related and constitute a business necessity. Establishing a business necessity reason for the hiring practice can serve as an affirmative defense for employment discrimination.¹⁶³ As previously noted, for issues concerning artificial intelligence, the primary question “seems to be ‘whether . . . the target variable . . . is job related’ . . . [and] actually predictive of the job related trait.”¹⁶⁴ Video interview algorithms “are prognostic by nature,” created for the sole purpose of identifying job-related traits.¹⁶⁵ Relying on biased input data—where a target variable is perhaps positively correlated with both successful job performance as well as historical discrimination—means that an employer may meet its burden to prove that a model correlates to job performance even if the model has a discriminatory impact. The open

159. Ajunwa, *supra* note 7, at 626–27 (referencing the work of other legal scholars like Richard Thompson Ford, James Grimmelman, Robert Post, David Benjamin Oppenheimer, and Noah Zatz).

160. *Id.*

161. *Id.* at 625.

162. *Id.* at 674.

163. 42 U.S.C. § 2000e-2(k)(1)(A)(i) (“[A plaintiff] demonstrates that a respondent uses a particular employment practice that causes a disparate impact on the basis of [a protected characteristic] and the respondent fails to demonstrate that the challenged practice is job related for the position in question and consistent with its business necessity.”).

164. Raub, *supra* note 154, at 549.

165. *Id.* at 549–550.

question concerning an employer's burden of proof asks whether the model extends beyond proving mere statistical correlation to job performance; that is, as others have asked, does an employer have to go as far as to "[show] that no problems exist with the data or model construction that are biasing the results"?¹⁶⁶ The legal scholar Pauline Kim, suggests Title VII could be interpreted to apply this higher burden.¹⁶⁷ However, many other scholars suggest that it is unlikely the Court would require such proof under existing case law.¹⁶⁸ A plaintiff would need open access to an algorithm to parse out these insights themselves—and such access would almost certainly be impossible to obtain.¹⁶⁹ As Professor Sandra Sperino notes, employers are "reluctant to produce this information voluntarily," resulting in an informational asymmetry that disadvantages plaintiffs in the litigation process.¹⁷⁰

This power imbalance continues to play out even for plaintiffs who succeed to the next step in the litigatory process, when the claimant has the opportunity to prove that a less discriminatory alternative employment practice exists after an employer has made its case. As Raub points out, "[i]f an employer fails to effectively disclose or defend the validity of its algorithm and data collection . . . the plaintiff is hamstrung."¹⁷¹ That is, a claimant cannot effectively defend themselves against a model they cannot examine or understand. James Grimmelman and Daniel Westreich come to a similar conclusion in *Incomprehensible Discrimination*, wherein they examine the legal implications of a hiring model that is positively correlated to job performance yet yields a discriminatory impact.¹⁷² Grimmelman and Westreich find that it may be hard for a claimant to "improve on an algorithm it did not create and does not understand"; thus, the claimant would likely fail to offer the sort of "concrete and less discriminatory alternative" necessary to prevail under current Title VII case law.¹⁷³ Grimmelman and Westreich propose, like Pauline T. Kim, a heightened standard to prove business necessity, which would

166. *Id.* at 551 (quoting Kim, *supra* note 7, at 921).

167. Kim, *supra* note 7, at 921.

168. *See* Grimmelman & Westreich, *supra* note 7, at 168–69 (stating that an employer would theoretically meet its burden of proof "by showing an 'undisputed statistically and practically significant correlation' " between an algorithm's outcome and a measure of job performance); *see also* Barocas & Selbst, *supra* note 12, at 702–05 (highlighting that courts employ a varying standard of job-relatedness and business necessity and that courts generally accept some finding that an outcome is predictive of job-performance as satisfying an employer's burden).

169. Raub, *supra* note 154, at 550.

170. Sperino, *supra* note 156, at 361.

171. Raub, *supra* note 154, at 552.

172. Grimmelman & Westreich, *supra* note 7, at 164.

173. *Id.* at 169.

“[require an employer] to show not just that its model’s scores are . . . *correlated* with job performance but *explain* it.”¹⁷⁴ While such a standard may help a plaintiff prevail, this heightened standard is far from the standard interpretation of an employer’s burden under Title VII.

Take, for example, cases of accent discrimination. Accent discrimination is a credible threat of automated video systems given that many video interview algorithms employ vocal analysis. In fact, a recent audit of HireVue’s algorithms suggest that accent discrimination may already be present in the company’s assessment outcomes.¹⁷⁵ Title VII case law suggests that there is a path for candidates to bring such accent discrimination claims under Title VII’s “national origin” protection clause.¹⁷⁶ Under Title VII, an employer may only consider an employee’s accent when making a hiring decision “if [the] accent materially interferes with being able to do the job.”¹⁷⁷ Case law suggests that the mere presence of an accent alone does not rise to the level of material interference. In *Fragante v. Honolulu*, the Ninth Circuit distinguishes between discriminating against someone because an accent is present and discriminating on the grounds that an accent makes communication difficult.¹⁷⁸ An employer may only make a hiring decision based on the “effect” of a candidate’s accent.¹⁷⁹ Further, a manager’s subjective dislike or preference concerning an accent is likely not enough to prove material interference. In *EEOC v. Brown and Brown Chevrolet, Inc.*, the Equal Employment Opportunity Commission (EEOC) charged that a car dealership’s failure to promote a salesman on the grounds he should “speak ‘more like an American’” was a Title VII violation.¹⁸⁰ Algorithms which discriminate on the basis of accent would need to prove that the accent in question is a relevant factor in

174. *Id.* at 170.

175. Jeremy Kahn, *HireVue Drops Facial Monitoring Amid A.I. Algorithm Audit*, FORTUNE (Jan. 19, 2021, 12:01 PM), <https://fortune.com/2021/01/19/hirevue-drops-facial-monitoring-amid-a-i-algorithm-audit/>.

176. Mari J. Matsuda, *Voices of America: Accent, Antidiscrimination Law, and a Jurisprudence for the Last Reconstruction*, 100 YALE L.J. 1329, 1332 (1991).

177. *Fact Sheet: Immigrants’ Employment Rights Under Federal Anti-Discrimination Laws*, EEOC (Apr. 27, 2010), [https://www.eeoc.gov/laws/guidance/fact-sheet-immigrants-employment-rights-under-federal-anti-discrimination-laws#:~:text=Treating%20employees%20differently%20because%20they,able%20to%20do%20the%20job.&text=If%20a%20person%20has%20an,sh%20cannot%20be%20discriminated%20against](https://www.eeoc.gov/laws/guidance/fact-sheet-immigrants-employment-rights-under-federal-anti-discrimination-laws#:~:text=Treating%20employees%20differently%20because%20they,able%20to%20do%20the%20job.&text=If%20a%20person%20has%20an,sh%20cannot%20be%20discriminated%20against.).

178. *Fragante v. City & Cty. of Honolulu*, 888 F.2d 591, 599 (9th Cir. 1989).

179. *Id.*

180. David Woodfill, *Brown & Brown Settles Suit Over Nigerian Accent*, E. VALLEY TRIB. (Oct. 7, 2011), https://www.eastvalleytribune.com/news/brown-brown-settles-suit-over-nigerian-accent/article_f41851cd-f3ab-537b-9d60-74127f44a6ba.html (citing *EEOC v. Brown & Brown Chevrolet, Inc.*, No. CV-05-1575-PHX-ROS (filed D. Ariz. May 26, 2005)).

determining job performance. It is not clear that mere correlation between previous high performers is enough to meet this burden.

Yet, despite the potential for candidates to find protection under Title VII for instances of accent discrimination, the likelihood of prevailing remains low because employers are likely to mount a business necessity defense. As Mari Matsuda identifies in *Voices of America: Accent, Antidiscrimination Law, and a Jurisprudence for the Last Reconstruction*, in practice, “[t]he fact that communication is an important element of job performance . . . tends to trump this prohibition against discrimination, such that it is impossible to explain when or why plaintiffs will ever win in accent cases. In fact, they almost never do.”¹⁸¹ According to Matsuda, the issue is that Title VII prohibits discrimination on the basis of a protected class but allows discrimination on the basis of “job ability.”¹⁸² For accent discrimination, this means that when employers argue that accent is inextricably linked to job-related communication skills, they can effectively evade Title VII liability.¹⁸³ Matsuda summarizes the issue succinctly: “in every accent case the employer will raise the “[customers] ‘can’t understand [the employee or job candidate]’ defense, and in almost every reported case, the courts have accepted it.”¹⁸⁴ For video interview algorithms which show evidence of accent discrimination, this means that employers may effectively evade liability by claiming that the discrimination in question was a valid byproduct of the algorithm’s assessment of communication skills. Claiming the algorithm found that the applicant’s accent impeded effective communication with the AI in question may be enough for employers to prevail.

Overcoming the employer’s business necessity defense against a Title VII suit is incredibly difficult. Indeed, on the whole, Title VII places too great of a burden on plaintiffs to offer any substantive protection in the age of machine learning and video interviewing. Although there are mounting calls from some scholars to reconsider the mandates and burdens of Title VII in ways more favorable to plaintiffs, the current judicial interpretation of Title VII ultimately renders it inadequate to fully address the unlawfully discriminatory impact of video interviewing.

B. THE AMERICANS WITH DISABILITIES ACT (ADA)

Although the American with Disabilities Act (ADA) could provide some protection for disabled applicants, the heightened burden of proof for ADA

181. Matsuda, *supra* note 176, at 1332.

182. *Id.* at 1348.

183. *See id.* at 1350.

184. *Id.*

cases now established by *Murray*¹⁸⁵ means that proving discrimination on the basis of a disability for job applicants may be difficult. In 1990, Congress passed the ADA, a piece of civil rights legislation designed to explicitly encode the rights of disabled individuals in law.¹⁸⁶ Amended in 2008 to alter and significantly expand the definition of disability under the Act, the ADA applies to employers with fifteen or more employees and features specific protections for disabled individuals in various settings, including the job application process.¹⁸⁷ The ADA specifically regulates preemployment assessments, prohibiting the use of “qualification standards, employment tests or other selection criteria that screen out or tend to screen out an individual with a disability or a class of individuals with disabilities” unless the assessment or criterion is proven to be a job-related, business necessity.¹⁸⁸ As video interview algorithms serve as a form of assessment, they may therefore implicate the ADA if they are found to screen out applicants on the basis of their ability status. Employers must take care that their assessment algorithms allow employees with impairments concerning “sensory, manual, or speaking skills . . . [to achieve] results [that] accurately reflect the skills, aptitude, or whatever other factor of such applicant or employee that such test purports to measure.”¹⁸⁹ Failure to do so constitutes discrimination under the ADA.¹⁹⁰

Beyond preemployment assessments, the ADA also includes specific provisions concerning medical examinations. Although an employer is permitted to “make preemployment inquiries into the ability of an applicant to perform job-related functions,” the Act prohibits any medical examination or inquiry to determine an applicant’s disability status—be it in kind or severity—unless it constitutes a job-related, business necessity.¹⁹¹ Regardless of job-relatedness, the Act prohibits an employer from requiring any medical

185. *See Murray v. Mayo Clinic*, 934 F.3d 1101, 1105 (9th Cir. 2019), *cert. denied*, 140 S. Ct. 2720 (2020) (“Because *Head*’s reasoning is clearly irreconcilable with *Gross* and *Nassar*, we overrule *Head*’s holding that a plaintiff bringing a discrimination claim under Title I of the ADA need show only that a disability was a motivating factor of the adverse employment action. We hold instead that an ADA discrimination plaintiff bringing a claim under 42 U.S.C. § 12112 must show that the adverse employment action would not have occurred but for the disability.”).

186. *What is the Americans with Disabilities Act (ADA)?*, ADA NAT’L NETWORK, <https://adata.org/learn-about-ada> (last visited Mar. 17, 2021).

187. *Notice Concerning The Americans With Disabilities Act (ADA) Amendments Act of 2008*, EEOC (Mar. 25, 2011), <https://www.eeoc.gov/statutes/notice-concerning-americans-disabilities-act-ada-amendments-act-2008>; *Fact Sheet: Disability Discrimination*, EEOC (Jan. 15, 1997), <https://www.eeoc.gov/laws/guidance/fact-sheet-disability-discrimination>.

188. Americans with Disabilities Act of 1990, 42 U.S.C. § 12112(b)(6) (1990).

189. 42 U.S.C. § 12112(b)(7).

190. *Id.*

191. 42 U.S.C. §§ 12112(d)(2)(B), (d)(4)(A).

examinations before a conditional offer of employment is made.¹⁹² According to Melson-Silimon and her coauthors, in *Personality Testing and the Americans With Disabilities Act*, criteria for determining if a preemployment assessment constitutes a medical examination includes the following:

the test (a) was administered by a healthcare/medical professional; (b) was interpreted by a healthcare or medical professional; (c) was originally designed to reveal an impairment or an applicant's current mental or physical health; (d) was invasive; (e) measured a physiological response (e.g., heart rate) to a (job-related) physical task; (f) is typically used in a medical setting; or (g) involved the use of medical equipment.¹⁹³

Significantly, ADA provisions concerning medical examinations extend to “psychological tests that are designed to identify a mental disorder or impairment.”¹⁹⁴ The EEOC effectively distinguishes between prohibited psychological tests that constitute a medical examination and other forms of psychological tests; it states there are some permissible tests for pre-offer employment screening under the ADA, “includ[ing] measures of honesty, preferences, and habits.”¹⁹⁵

The EEOC acted in numerous cases since the ADA went into effect. When and how it chooses to enforce the ADA may offer significant guidance for interpreting how it may approach enforcement in terms of video interview algorithms. Take, for example, *EEOC v. Subway Inc.*, filed in Indiana.¹⁹⁶ The agency argued that the franchise “violated federal law by rejecting a hard-of-hearing applicant because of his hearing and resultant speech impairments.”¹⁹⁷ The franchise allegedly chose not to hire an impaired candidate “because of

192. *Questions and Answers: Enforcement Guidance on Disability Related Inquiries and Medical Examinations Under the Americans with Disabilities Act*, EEOC (July 27, 2000), <https://www.eeoc.gov/laws/guidance/questions-and-answers-enforcement-guidance-disability-related-inquiries-and-medical>.

193. Arturia Melson-Silimon, Alexandra M. Harris, Elizabeth L. Shoenfelt, Joshua D. Miller & Nathan T. Carter, *Personality Testing and the Americans With Disabilities Act: Cause for Concern As Normal and Abnormal Personality Models Are Integrated*, 12 INDUS. ORG. PSYCH. 119, 121 (2019) (citing *Enforcement Guidance on Disability-Related Inquiries and Medical Examinations of Employees Under the ADA*, EEOC (July 26, 2000), https://www.eeoc.gov/laws/guidance/enforcement-guidance-disability-related-inquiries-and-medical-examinations-employees#N_33_).

194. *Id.*

195. *Id.*

196. See Press Release, EEOC, Subway Franchisee to Pay \$28,700 to Settle EEOC Disability Discrimination Suit (Mar. 26, 2021), <https://www.eeoc.gov/newsroom/subway-franchisee-pay-28700-settle-eeoc-disability-discrimination-suit>.

197. *Subway Franchisee Sued by EEOC for Disability Discrimination*, EEOC (Sept. 23, 2020), <https://www.eeoc.gov/newsroom/subway-franchisee-sued-eeoc-disability-discrimination>.

his disability, citing a ‘communication concern’ due to the applicant’s ‘hearing’ and ‘speaking.’”¹⁹⁸ The EEOC argued that this adverse employment action constituted disability discrimination that violated the ADA.¹⁹⁹ This enforcement action is significant as it shows that the EEOC does not simply allow employers to argue that an impairment materially disqualifies a disabled individual from a given job. Although sandwich makers with specific ways of speaking may have been typical in the Subway franchise or may have even been preferable in the employer’s view, the EEOC effectively stated that such speaking patterns are not a legitimate consideration for job qualification such that the hard of hearing individual may be disqualified. Thus, video interview algorithms which consider certain speaking patterns in making an employment decision may directly violate the ADA.

In *EEOC v. Randstad, US, LP*²⁰⁰ the EEOC filed suit against a Maryland company that failed to hire an individual once he disclosed his autism.²⁰¹ The company allegedly initially considered the applicant highly qualified for the lab technician job in question, “fast-track[ing] [the candidate’s] participation in the hiring process” as result.²⁰² Once the applicant disclosed his disability, however, “he was told that the lab technician position had been put ‘on hold.’”²⁰³ Ultimately, the applicant was not hired and the company went on to fill the position with another recruit. The EEOC argued that this adverse employment decision was made in response to the applicant’s autism disclosure in violation of the ADA.²⁰⁴ The case was settled with Randstad agreeing to pay \$60,000.²⁰⁵ In the context of video interview assessments, this case is significant because it suggests that employers may be liable for discrimination based on a hidden disability once it is revealed through the hiring process. Given the invasive nature of data-based insights, a video interview algorithm may effectively disclose and penalize disability without an individual ever consenting to such disclosure, and this action would directly violate the ADA.

198. *Id.*

199. *Id.*

200. *EEOC v. Randstad*, No. 1:11-cv-01303 (D. Md. filed May 10, 2012).

201. *Randstad US Sued by EEOC for Disability Discrimination*, EEOC (May 13, 2011), <https://www.eeoc.gov/newsroom/randstad-us-sued-eeoc-disability-discrimination>.

202. *Id.*

203. *Id.*

204. *Id.*

205. *Randstad US, LP to Pay 60,000 to Settle EEOC Disability Bias Suit* (May 10, 2012), <https://www.eeoc.gov/newsroom/randstad-us-lp-pay-60000-settle-eeoc-disability-bias-suit>.

Although automated video interviewing is still a relatively new practice, there is some case law concerning the legality of personality testing under the ADA. This case law proves compelling, if not controlling, precedent for certain video interview algorithms which also test for personality traits. HireVue, for example, states its assessments are designed to produce “excellent insight into attributes like social intelligence (interpersonal skills), communication skills, *personality traits*, and overall job aptitude.”²⁰⁶ Given the vague yet potentially invasive nature of the insights video interview algorithms produce concerning an individual’s personality, it is valuable to consider how case law has treated personality testing under the ADA when evaluating protections for video interview candidates.

To the extent that automated video interviewing systems are also personality tests, the case of *Thompson v. Borg-Warner Protective Services Corp* (1996) has helped to establish these automated systems do not necessarily violate the ADA’s medical examination clause in all instances.²⁰⁷ The court found that plaintiff Bog-Warner’s use of a personality test called PASS-III to screen security guard applicants was legal.²⁰⁸ The court directly applied the factors laid out by the EEOC’s guidance to determine that PASS-III was not a medical exam for ADA purposes.²⁰⁹ By distinguishing between prohibited pre-offer medical exams and preemployment assessments that provided “information surrounding an applicant’s character or personality traits, and their fit for the job,” the court effectively found that personality tests may be permitted by the ADA in some forms.²¹⁰ This precedent means that video interview assessments must therefore meet more specific criteria to invoke the ADA’s medical examination protection.

The Seventh Circuit Court of Appeals decision in *Karraker v. Rent-A-Center* (2005) sheds insight on what an assessment that violates the ADA’s medical examination clause may look like. In *Karraker*, the court found that Rent-A-Center’s use of the Minnesota Multiphasic Personality Inventory (MMPI) as one of many variables in their pre-promotion test constituted discrimination under the ADA because “although applicant responses were not interpreted by a medical professional, the use of the MMPI would still be likely to identify

206. Patricia Barnes, *Artificial Intelligence Poses New Threat to Equal Employment Opportunity*, FORBES (Nov. 10, 2019, 1:57 PM) (emphasis added), <https://www.forbes.com/sites/patriciabarnes/2019/11/10/artificial-intelligence-poses-new-threat-to-equal-employment-opportunity/?sh=6e0a33036488>.

207. *Thompson v. Borg-Warner Protective Servs. Corp.*, No. C-94-4015, 1996 WL 162990 (N.D. Cal. Mar. 11, 1996).

208. *Id.* at *9.

209. Melson-Silimon et al., *supra* note 193, at 122–23.

210. *Id.* at 123.

and ‘weed out’ individuals with PDs who are protected under the ADA.”²¹¹ The court found that the MMPI was at least partly designed to identify mental illness and thus constituted a medical examination.²¹² Applied to video interview algorithms, this case shows that algorithms need not be interpreted by a doctor to violate the ADA; they need only be proven to be designed even in part to reveal mental impairments. Based on *Karraker’s* precedent, any video interview algorithm that incorporated the MMPI or a similar medical assessment in its design may violate the ADA. However, given the opaque nature of algorithms, proving such integration would be nearly impossible. Furthermore, the MMPI is a more obvious example of an assessment designed to reveal mental impairments, given its use as a medical diagnostic tool. It is not clear how courts would apply this precedent to proprietary algorithmic insights, which de facto reveal impairments by coding for particular traits that are proxies for disability.

Even if courts found that automated video interviewing constituted an illegal medical assessment under the ADA, job candidates may still struggle to prevail on their claims. In *Barnes v. Cochran*, the court found that a preemployment psychological evaluation violated the ADA’s ban on pre-offer medical evaluation, applying the EEOC’s seven factor guidance to the case.²¹³ However, the court nonetheless ruled in favor of the employers, reasoning that the plaintiff did not meet their burden of proof to show that “employment was denied for discriminatory reasons,” thus mooted the ADA violation.²¹⁴ According to Melson-Silimon and her coauthors, “[t]his decision highlights the burden plaintiffs face when suing on the grounds of disability-based discrimination; specifically, any legitimate justification articulated by the defendant for an adverse employment decision must be proven by the plaintiff to be a pretext for discrimination.”²¹⁵ Given that employment algorithms consider thousands of different data points, it may be nearly impossible to prove that the disability in question was the deciding factor in the algorithm’s ultimate employment recommendation. This is an issue not limited to medical examination cases, but one central to all ADA claims which may be brought against video interview algorithms.

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

212. Abdi Tinwalla & J. Richard Ciccone, *ADA and Medical Examinations*, 34 J. AM. ACAD. PSYCHIATRY L. ONLINE 255, 256 (2006).

213. Melson-Silimon et al., *supra* note 193, at 123.

214. *Id.*

215. *Id.*

Critically, the ADA was modeled in part as parallel legislation to the Civil Rights Act of 1964.²¹⁶ Title I of the ADA specifically and intentionally mirrors Title VII, down to EEOC enforcement power granted over both statutes.²¹⁷ Applying the ADA to video interviewing thus faces many of the same challenges as seen in a Title VII case. ADA claims follow a similar litigation structure to Title VII claims, though they largely fall under disparate treatment theories rather than impact.²¹⁸ This means that an applicant would need to prove an employer would not have made the adverse employment decision in question but for the individual's disability. Thus, a claimant providing evidence that a video interview algorithm constituted a prohibited pre-offer medical examination or could have screened out candidates with disabilities is not enough.²¹⁹ The candidate must still prove that in their specific case: the causative reason for why they did not get a job offer was that the interviewing algorithm screened them out on the basis of a disability. Satisfying such a burden of proof would require a deep insight into the algorithm in question, a level of access which the job applicant would almost certainly be denied. Prevailing on an ADA claim would therefore prove a serious challenge in the face of the opaque nature of hiring algorithms given that (1) many applicants are prevented from examining the hiring algorithms, and (2) the black box nature of some algorithms makes it difficult to ascertain how exactly the discrimination happened.²²⁰

C. PRIVACY LAW PROTECTION FOR JOB APPLICANTS?

Besides potentially discriminatory harms, automated video interviewing systems pose great privacy risks because, as a necessary means to quantifying the veracity and character of job applicants, they capture a treasure trove of biometric data. Thus, another question is whether there are any extant privacy laws that can provide some legal protection to job applicants. The Sections below briefly review the different genres of privacy laws and policies and their limitations.

216. Robert D. Dinerstein, *The Americans with Disabilities Act of 1990: Progeny of the Civil Rights Act of 1964*, AM. BAR ASS'N (July 1, 2004), https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/human_rights_vol31_2004/summer2004/irr_hr_summer04_disable/.

217. *Id.*

218. Third Circuit Model Jury Instruction for Employment Claims Under the Americans with Disabilities Act (Apr. 19, 2019), https://www.ca3.uscourts.gov/sites/ca3/files/9_Chap_9_2019_April.pdf.

219. *Id.*

220. Desai & Kroll, *supra* note 18, at 636.

1. *Notice and Consent*

In the United States, federal information privacy law and policy generally follows a framework known as “notice-and-consent.”²²¹ Legal scholar Daniel Susser explains the origins of this framework in *Notice After Notice-and-Consent*, as he examines common criticism of the policy, advocating for the importance of privacy disclosures despite concerns about consent.²²² Notice-and-consent grew out of a 1973 project by the U.S. Department of Health, Education, and Welfare (HEW) to mitigate “the threat to individual privacy posed by the government’s move toward computerized record-keeping.”²²³ HEW’s response was to establish the “‘Fair Information Practice Principles’ (FIPPs)” to guide regulation and policymaking around information privacy.²²⁴ Critically, the FIPPs are only guidance: they do not in and of themselves have the weight of law.²²⁵ Rather, they “encourage” compliance through the threat of “Federal Trade Commission (FTC) enforcement actions” on the basis “‘unfair and deceptive’ trade practices.”²²⁶ Thus, the regulatory value of the FIPPs heavily depends on how the FTC conceptualizes and enforces them. The FTC updated the FIPPs in 2000 “as guidance for designing commercial privacy policies.”²²⁷ The revised FIPPs offer four recommendations concerning “Notice,” “Choice,” “Access,” and “Security,” stating that:

1. Notice—Websites would be required to provide consumers clear and conspicuous notice of their information practices, including what information they collect, how they collect it (e.g., directly or through nonobvious means such as cookies), how they use it, how they provide choice, access, and security to consumers, whether they disclose the information collected to other entities, and whether other entities are collecting information through the site.
2. Choice—Websites would be required to offer consumers choices as to how their personal identifying information is

221. Daniel Susser, *Notice After Notice-and-Consent: Why Privacy Disclosures Are Valuable Even If Consent Frameworks Aren’t*, 9 J. INFO. POL’Y 37, 37 (2019).

222. *Id.*

223. *Id.* at 39.

224. *Id.* at 39–40.

225. See U.S. GOV’T ACCOUNTABILITY OFF., GAO-14-81, IN-CAR LOCATION-BASED SERVICES, APPENDIX I: OBJECTIVES, SCOPE, AND METHODOLOGY 23, 25 n.4 (2013) (“FIPPs are widely accepted principles for protecting the privacy and security of personal information. They were first proposed in 1973 by a U.S. government advisory committee. FIPPs are not precise legal requirements. Rather, they provide a framework of principles for balancing the need for privacy with other interests.”).

226. Susser, *supra* note 221, at 41.

227. *Id.*

used beyond the use for which the information was provided

3. Access—Websites would be required to offer consumers reasonable access to the information a website has collected about them, including a reasonable opportunity to review information and to correct inaccuracies or delete information.
4. Security—Websites would be required to take reasonable steps to protect the security of the information they collect from consumers.²²⁸

These principles gave rise to the notice-and-consent regime.²²⁹ Susser purports that the FIPP revisions are significant given their “procedural” nature. Because the FTC “drop[ped] the substantive concerns about data reliability and purpose specificity” that were central to the original FIPPs, the resulting notice-and-consent framework essentially allows employers to use consumer information as they see fit, so long as consumers knowingly agree.²³⁰ According to Susser, critics have panned this “free-market approach to privacy” for (1) not truly providing consumers “real options to choose from”; (2) allowing businesses to exploit “information asymmetries” at the expense of the uninformed consumer; (3) proving to be an unfeasible method for “engag[ing] with a huge number of information actors” in the modern day; (4) forcing consumers to “make onetime decisions” about particular pieces of data without knowing the long term “aggregate” effects of that data; and (5) ignoring the “social interests” inherent to data, instead vesting all decision-making authority with consumers.²³¹ Susser, following various other critics including Joel Reidenberg, Solon Barocas, and Helen Nissenbaum, ultimately declares “[n]otice-and-consent . . . to be a failed regulatory model.”²³² He joins other scholars in proposing an alternative model for regulating information privacy in the age of Big Data, explored in more detail below.

The notice-and-consent framework’s failures are especially salient in the context of algorithm-based video interviewing. Consenting to give up one’s data rights in the video interview process may not feel like much of a choice when employment is at stake; companies may not offer, or advertise that they offer, any meaningful alternative method of job candidate evaluation. As such, the nature of the hiring process means candidates may consent by default. Furthermore, it is important to consider when and how employers provide

228. *Id.* at 41–42.

229. *Id.* at 42.

230. *Id.* at 41.

231. *Id.* at 42–46.

232. *Id.* at 43–47.

notice disclosures to candidates. Some video interview vendors only act as “data processer[s]”; that is, *employers* retain the rights to control the data candidates provide, not the software company itself.²³³ Thus, a candidate cannot simply turn to a vendor’s website to understand how their data will be used. They instead must seek out an employer’s privacy policy directly.

These practices pose two potential issues. First, how employers choose to provide a privacy notice would likely have a big impact on whether the candidate was actually capable of consenting: if the disclosure occurred right before a candidate started an interview, it is likely that the applicant may see consent as part of the bargain to have the opportunity for an interview. Second, delegating data control to employers means that a candidate’s privacy rights are directly tied to the power asymmetry of the preemployment relationship. Candidates may be less likely to ask questions or request data access from an employer for fear of risking their job opportunity. What’s more, candidates who engage with the same video interview software for interviews across multiple companies may not realize that their privacy rights are changing with each successive interview. As such, they may only read the first disclosure and consent to all successive disclosures under the assumption that the substance is the same. This potential confusion is significant given the serious privacy issues inherent to video interviewing, discussed in more detail below. Above all, as Susser identified, notice-and-consent’s procedural protections do not address any of the substantive privacy issues that candidates face. If an employer chooses to share the highly sensitive, aggregated data insights they mined from a candidate’s interview with other businesses or potential employers, it’s not clear what substantive right notice-and-consent would give a candidate over their data if the candidate had already signed an initial, broad consent agreement.

2. *State Law*

Given the massive gaps federal privacy law leaves, some states have taken steps to protect against the threat of employers harnessing the power of Big Data. For example, in 2019, Illinois passed the Artificial Intelligence Video Interview Act (AIVIA), specifically designed to govern privacy risks associated

233. *HireVue Privacy Notice*, HIREVUE, <https://www.hirevue.com/privacy#what-info-does-hirevue-collect> (Jan. 20, 2021) (“If you are a job candidate (“Candidate”) or employee (“Employee”) using our Services on behalf of one of our customers who are engaging us to provide the Services to them (the ‘Potential Employers’), we are collecting and processing your personal information on behalf of the Potential Employers. In such cases, we are acting as a data processor and are collecting and processing your personal information on their behalf and in accordance with their instructions.”).

with video interview assessments.²³⁴ This law, dubbed “the first of its kind in the US,”²³⁵ includes five main requirements to which employers using AI video technology, such as HireVue, must adhere. First, employers are required to “[n]otify the applicant, in advance, that the organization is using the technology to analyze video interviews.”²³⁶ The law further mandates that employers “[e]xplain to the applicant ‘how the [AI] works’ and what general characteristics the technology uses to evaluate applicants.”²³⁷ This clear call for transparency is helpful. However, many video technology companies do not publish adequate information on the workings of their products.²³⁸ Thus, the effects of this part of the law may take one of two paths: either AI video providers will be forced to publish more information about their algorithms *or* the standard for meeting this transparency mandate will be effectively so low as to render it meaningless. Beyond transparency, the law requires that employers “[o]btain, in advance, the applicant’s consent to use the technology.”²³⁹ The law also features provisions for data protection. It imposes limits on “the distribution and sharing of the video,” granting access “to only those persons ‘whose expertise or technology’ is necessary to evaluate the applicant.”²⁴⁰ Further, candidates are given some control over what happens to the video after their assessment. Employers are required to “destroy the video (and all backup copies) within 30 days” of the applicant requesting its destruction.²⁴¹

Law firm David Wright Tremaine LLP (DWT) identifies a few key issues with the law. Chiefly, the law fails to define “‘artificial intelligence’ and ‘artificial intelligence analysis’ ” along with other “key terms.”²⁴² This ambiguity may mean that certain employer AI uses, such as “to track data about its candidates,” may not be covered.²⁴³ Further, ambiguity in the transparency part

234. Rebecca Heilweil, *Illinois Says You Should Know If AI Is Grading Your Online Job Interviews*, VOX (Jan. 1, 2020), <https://www.vox.com/recode/2020/1/1/21043000/artificial-intelligence-job-applications-illinois-video-interview-act>.

235. *Id.*

236. Matthew Jedreski, Jeffrey S. Bosley & K.C. Halm, *Illinois Becomes First State to Regulate Employers’ Use of Artificial Intelligence to Evaluate Video Interviews*, DAVIS WRIGHT TREMAINE LLP (Sept. 3, 2019), <https://www.dwt.com/blogs/artificial-intelligence-law-advisor/2019/09/illinois-becomes-first-state-to-regulate-employers>.

237. *Id.*

238. *See generally* Desai & Kroll, *supra* note 18, at 636 (arguing that many algorithmic systems are “black box” systems with little explanation of their workings).

239. Jedreski et al., *supra* note 236.

240. *Id.*

241. *Id.*

242. *Id.*

243. *Id.*

of the law may, as suggested above, poses serious problems for its effective use. DWT notes that the law does not go in-depth to specify or define “how much detail about the AI technology an employer must provide when ‘explaining how artificial intelligence works’ to an applicant” or what “ ‘characteristics’ of the AI employers must disclose.”²⁴⁴ Therefore, employers may be permitted to use broad, cursory statements such as “AI will assess a candidate’s performance”²⁴⁵ to satisfy this requirement—statements that do not serve the true spirit of transparency. There is further no requirement that candidate consent be expressly written.²⁴⁶ DWT notes, further, that the law “does not include a private right of action or any explicit penalties”; this could raise serious issues in enforcing its provisions.²⁴⁷ As for data destruction, DWT points out that it is not clear if “data that an employer extracts or derives from the video interviews . . . is subject to the destruction duty under the law.”²⁴⁸ If such data is not protected by AIVIA, then the extent to which the act allows candidates control over their interview data is potentially limited. Lastly, DWT points out that “there is no guidance on what it means for a job to be ‘based in’ Illinois, and the statute is silent as to whether employees may refuse to consider applicants who refuse to consent.”²⁴⁹

Ultimately, AIVIA is a step in the right direction, as it touches on the serious concerns of transparency and data rights. However, the primary, overarching issue with the act is a lack of specificity. Failing to define key terms, expand on essential provisions, or stipulate any enforcement mechanism means that the effective impact of transparency and data rights measures is limited and employers who wish to evade the law may do so. Further, although some employers may surely make a good faith effort to comply, many employers themselves are not privy to how the AI they use truly works. Companies such as HireVue keep a close guard over their algorithms and technologies to protect their market share, to the detriment of clients and candidates alike. In order to push AI video interview companies to be more transparent, the law must put in place effective penalties such that employers would not choose to use technology unless AI companies provided enough information. Effective legislation must hold enough weight to impact all stakeholders in the AI video interview universe. Again, it is important to reiterate that Illinois is “at the forefront of regulating technology and personal

244. *Id.*

245. Ajunwa, *supra* note 7, at 644.

246. Jedreski et al., *supra* note 236.

247. *Id.*

248. *Id.*

249. *Id.*

data.”²⁵⁰ AIVIA should be commended as first-of-its-kind legislation that is shedding light on critical issues of public interest. It simply needs to go further to counterbalance the immense power that the AI sphere currently holds. Regardless, AIVIA acts as a model for other states to specifically protect consent and disclosure data rights around video interviewing. Given that federal protections may not apply, such specific legislation is an important first step to protecting applicant data.

Another Illinois law, the Biometric Information Privacy Act (BIPA), passed in 2008, offers more substantive protections around the specific issue of biometric privacy.²⁵¹ Key BIPA provisions around biometric data collection and use by businesses include “informed consent,” “a limited right to disclosure,” “protection obligations and retention guidelines,” “prohibit[ions on] profiting from biometric data,” “a private right of action for individuals harmed by BIPA violations,” and provisions for “statutory damages.”²⁵² Given that video interview assessments varyingly consider vocal and facial expressions, assessments may actually qualify for BIPA protections as biometric data refers to “the measurement and statistical analysis of an individual’s physical and behavioral characteristics,” including “voice prints,” “face . . . features,” “gestures,” and “voice.”²⁵³ While BIPA is primarily procedural in nature—again adhering to the federal notice-and-consent framework—it does afford candidates the right to sue and protections concerning third party access to sensitive biometric data. This is important considering the serious potential harm that may come to candidates if sensitive biometric interview data is sold to third parties, not in the least limited to the threat of deep fakes as discussed in a later Section. BIPA therefore fills a gap as it encodes specific kinds of information privacy in law, though it stops short of prohibiting the collection of such information altogether. Unfortunately, while other states, including Texas and Washington, have passed similar laws, these states appear to offer even more limited protections than Illinois.²⁵⁴

250. *Id.*

251. JACKSON LEWIS, ILLINOIS BIOMETRIC PRIVACY ACT FAQs (2021), <https://www.jacksonlewis.com/sites/default/files/docs/IllinoisBIPAFaqs.pdf>.

252. *Id.*

253. *Id.*

254. *See Collection of Biometric Data Raises Privacy Concerns for Employees and Compliance Issues for Employers*, FISHER PHILLIPS (Mar. 15, 2018), <https://www.fisherphillips.com/Employment-Privacy-Blog/collection-of-biometric-data-raises-privacy-concerns>; *see also* Capture of Use of Biometric Identifier Act, 50 TEX. BUS. & COM. CODE ANN. § 503.001 (resembling BIPA by requiring that, prior to being authorized to collect biometric identifiers: (1) the organization must obtain informed consent that (2) need not be in writing, (3) from individuals; but, differing from Illinois’ state law by only allowing the Texas Attorney General

Therefore, while offering a partially useful model, BIPA does not constitute or represent sweeping biometric privacy protections at the state level.

Some states have gone beyond specific privacy applications, instead creating more broad privacy protections to govern information exchanges at large. The California Consumer Privacy Rights Act (CCPA) offers one such example.²⁵⁵ Recently passed in 2020, CCPA gives consumers specific, enumerated rights over their data including the

1. Right to Correct Inaccurate Information . . .
2. Right to Have Personal Information Collected Subject to Data Minimization and Purpose Limitations . . .
3. Right to Receive Notice from Businesses Planning on Using Sensitive Personal Information and Ask Them to Stop . . .
4. Right to Access Information . . . [and]
5. Right to Opt Out of Sharing Information with Third Parties.²⁵⁶

As of January 1, 2021, CCPA protections were extended to Californian job applicants.²⁵⁷ Although the CCPA largely follows notice-and-consent frameworks, it takes significant steps towards giving consumers and employees meaningful control over their data by allowing individuals to opt-out of data sharing and certain uses of their data over its lifespan.

Given the law's newness, it's hard to measure its practical effects; reports suggest that the law's launch has resulted in a mix of "firms . . . disclosing too little data—or far too much."²⁵⁸ Companies such as Uber and Lyft have been selective as to what data they choose to disclose and what they choose to

to enforce the law as the law does not provide a private right of action); H.B. 1493, 65th Leg., 2017 Sess. (Wash. 2017) (limiting the definition of "biometric data" so that it likely excludes the facial recognition technology social media and photo storage websites use to automatically tag users in digital photographs and applying the law only to those biometric identifiers who are "enrolled" in a commercial database).

255. *California Privacy Rights Act*, PRIV. RTS. CLEARINGHOUSE (Dec. 10, 2020), <https://privacyrights.org/resources/california-privacy-rights-act-overview#:~:text=The%20California%20Privacy%20Rights%20Act%20clarifies%20that%20people%20can%20opt,per%20sonal%20information%20to%20third%20parties.&text=The%20California%20Privacy%20Rights%20Act%20expands%20this%20to%20cover%20data,includes%20a%20username%20and%20password.>

256. *Id.*

257. California Consumer Privacy Act of 2018, A.B.-25, 2019–2020 Sess. (Cal. 2019), https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB25.

258. Greg Bensinger, *So Far, Under California's New Privacy Law, Firms Are Disclosing Too Little Data—Or Far Too Much*, WASH. POST (Jan. 21, 2020, 7:44PM), www.washingtonpost.com/technology/2020/01/21/ccpa-transparency/.

retain.²⁵⁹ One Los Angeles man who tried to access his data reported that “[e]veryone seems to be . . . see[ing] what they can get away with I hate to say it, but I think the companies are going to win.”²⁶⁰ Thus, compliance remains a point of contention. Even if a state creates an all-encompassing information privacy law that extends to consumers and job applicants alike, ensuring that companies actually comply with the law is a massive regulatory task that state level agencies may struggle to keep up with. This reality makes the need for federal regulation with comprehensive enforcement mechanisms all the more critical.

On the whole, state laws offer some information privacy protections for certain states’ citizens who fall within certain categories. However, essentially no federal or state law offers an affirmative declaration of the data rights of job applicants. Notice-and-consent guidance has resulted in a serious gap in substantive protections. These patchwork state protections ultimately do not provide comprehensive protections.

3. *Fair Credit Report Act (FCRA) to the Rescue?*

The Fair Credit Reporting ACT (FCRA) is a “1970 [law enacted] to regulate the credit reporting industry because of concerns about the fairness and accuracy of credit reports.”²⁶¹ In recent years, legal scholars, and even the FTC, have suggested that its consumer privacy protections may extend to businesses using consumer data and data-based insights.²⁶² Thus, it is important to consider what, if any, privacy protections the FCRA may offer to video interview candidates.

The FCRA governs “compan[ies] . . . collecting and sharing third-party data that is used or expected to be used as a factor in determining eligibility for credit, insurance, employment, or other purpose[s] authorized under the

259. *Id.*

260. *Id.*

261. Pauline T. Kim & Erika Hanson, *People Analytics and the Regulation of Information Under the Fair Credit Reporting Act*, 61 ST. LOUIS U. L.J. 17, 20 (2016).

262. *See id.* at 28; *see also* Ajunwa, *supra* note 7, at 655; Karen Sanzaro, *Big Data: FTC Issues Report Cautioning that Use of Big Data May Violate Federal Consumer Protection Laws or Raise Ethical Considerations*, ALSTON & BIRD: PRIV., CYBER, & DATA STRATEGY BLOG (Jan. 19, 2016), <https://www.alstonprivacy.com/big-data-ftc-issues-report-cautioning-that-use-of-big-data-may-violate-federal-consumer-protection-laws-or-raise-ethical-considerations/> (summarizing FTC warning that companies using Big Data may be subject to the FCRA, references FTC enforcement actions against a firm that used consumer data for “eligibility determinations” without complying to FCRA).

FCRA.”²⁶³ These companies are considered “consumer reporting agencies” (CRAs) under the FCRA, formally defined as

any person which, for monetary fees, dues, or on a cooperative nonprofit basis, regularly engages in whole or in part in the practice of assembling or evaluating consumer credit information or other information on consumers for the purpose of furnishing consumer reports to third parties.²⁶⁴

Legal scholars Pauline T. Kim and Erika Hanson note that “entities that assemble and evaluate information for noncommercial uses as well as entities that assemble information about the entity’s own interactions with its customers” are not considered CRAs.²⁶⁵ Therefore, employers likely could not qualify as CRAs as interview reports would be for internal, noncommercial use; however, external video interview vendors who provide assessments to employers may. Thus, from the outset, it seems that the FCRA may govern video interview vendors to the extent that the data collected during a video interview is (1) for commercial use, and (2) considered a consumer report. Kim and Hanson refer to a three-prong framework that courts have developed to determine if “information constitutes a consumer report under the law”:

1) the information was communicated by the consumer reporting agency; 2) it bears on the “consumer’s credit worthiness, character, general reputation, personal characteristics, or mode of living”; and 3) it was “used or expected to be used or collected in whole or in part for one of the enumerated purposes.”²⁶⁶

All “elements” must be “satisfie[d]” to constitute a consumer report.²⁶⁷ Also expressly excluded from “consumer reports” are “report[s] containing information solely as to transactions or experiences between the consumer and the person making the report.”²⁶⁸ It seems plausible that video interviews may fall within this exclusion: the only consumer-specific data that interview assessments consider is collected from the interaction between the candidate and the algorithm. However, the algorithms *do* consider thousands of external

263. Chi Chi Wu, *Data Gatherers Evading the FCRA May Find Themselves Still in Hot Water*, NAT’L CONSUMER L. CTR. (June 14, 2019), <https://library.nclc.org/data-gatherers-evading-fcra-may-find-themselves-still-hot-water>.

264. *Id.* (quoting 15 U.S.C. § 1681a(f)).

265. Kim & Hanson, *supra* note 261, at 21–22.

266. *Id.* at 22 (quoting *Ernst v. Dish Network, LLC*, 49 F. Supp. 3d 377, 381 (S.D.N.Y. 2014) (citing cases from the U.S. Courts of Appeals)).

267. *Id.*

268. 15 U.S.C. § 1681a(d).

data points about other individuals.²⁶⁹ Although this is not information about the consumer, it is information used to make judgments and assumptions about the consumer which are not limited to the “transactions or experiences between the consumer” and reporter.²⁷⁰ The question would be to what extent this external information is actually “contain[ed]” within the report.²⁷¹

Thus, it seems possible that video interviews, where vendors collect candidate data to determine a candidate’s “character” or “personal characteristics” (amongst other things) for the purposes of employment eligibility qualify, could qualify as consumer reports under the FCRA.²⁷² Therefore, video interview vendors would likely qualify as CRAs. As I explored in a prior law review article, *The Paradox of Automation as Anti-Bias Intervention*, applying FCRA frameworks to hiring algorithms “may...enable the job applicant to discover if the employer had access to discriminatory information or even to establish a pattern of discriminatory information furnished to the employer for protected groups, thus perhaps assisting in a disparate impact cause of action.”²⁷³ As a CRA, vendors would be required to “follow reasonable procedures to assure the maximum possible accuracy of [their] files,”²⁷⁴ including allowing “consumers to review information in their files without charge, investigat[e] alleged inaccuracies, and provid[e] information to consumers about their rights.”²⁷⁵ Employers, as the entity using the consumer report, would be required to

provide a clear, conspicuous, and stand-alone disclosure [to applicants] that a consumer report may be obtained for employment purposes; they would be required to request written authorization from the applicant or employee for procurement of the report; and certify to the consumer reporting agency its compliance with the requirements of the statute and that it will not violate any equal employment opportunity law.²⁷⁶

Furthermore, the FCRA would require that an employer “provide notice before rejecting a job application . . . or taking any other adverse employment action” in addition to “provid[ing the applicant] a copy of the consumer report relied upon and a description of the individual’s rights under the FCRA,”

269. See *supra* Part II(b)(3) (denoting that external information is needed for a report to be considered a consumer report).

270. 15 U.S.C. § 1681(a)(d)(2)(i).

271. *Id.*

272. *Id.* at § 1681a(e).

273. Ajunwa, *supra* note 8, at 1735.

274. *Id.* at 1740.

275. Kim & Hanson, *supra* note 261, at 22–23.

276. *Id.* at 23.

which include “an opportunity to review the report and attempt to correct any mistakes.”²⁷⁷ After rejecting the applicant, the employer would further have to follow through with several more procedural steps, including providing information about the CRA who provided the report and “notice of the individual’s rights to dispute the accuracy or completeness of the report and to receive an additional copy of the report if requested within sixty days.”²⁷⁸ Failure to comply would result in FTC enforcement action.²⁷⁹

As Kim and Hanson note, the FCRA’s protections are “procedural.”²⁸⁰ Indeed, the FCRA does not offer job applicants any substantive right to privacy and does not “[limit] . . . the *types* of information that can be collected or reported.”²⁸¹ However, if video interviews were considered consumer reports under the FCRA, it seems possible that FCRA protections may ameliorate some problems inherent to video interviewing. Particularly, given the opaque nature of algorithms, disclosures concerning the reasoning for an adverse employment action on the basis of the interview may provide valuable “insight as to how [candidates] are evaluated” and could help society “regain some measure of checks over the information that is used to ‘screen’ candidates as part of the automated hiring trend.”²⁸²

Of course, these protections do not go far enough to control what kind of invasive data employers collect and how they use it. As Spencer Mainka observes in *Algorithm-Based Recruiting Technology in the Workplace*, “[t]he FCRA provides no relief for an applicant who was denied an opportunity based on inaccurate data because the FCRA only regulates the process.”²⁸³ In this way, FCRA follows the same pattern of free-market regulation as notice-and-consent. The invasive nature of the privacy threats that video interviewing poses requires more substantive protections. Beyond all of this, video interviews are likely excluded from FCRA protection, falling within the exclusion of “report[s] containing information solely as to transactions or experiences between the consumer and the person making the report.”²⁸⁴ The FCRA’s privacy protections may therefore not even apply at all. Regardless, it is useful to consider the utility of disclosure, central to the FCRA’s

277. *Id.*

278. *Id.* at 24.

279. *Id.*

280. *Id.*

281. *Id.* at 25.

282. Ajunwa, *supra* note 8, at 1741.

283. Spencer Mainka, *Algorithm-Based Recruiting Technology in the Workplace*, 5 TEX. A&M J. PROP. L. 801, 815 (2019).

284. 15 U.S.C. § 1681a(d).

frameworks, in combatting the opaque nature of algorithmic decision-making for employment.

IV. APPLYING A LEX INFORMATICA FRAMEWORK

Given the identified limitations of existing law to address the unlawfully discriminatory potential of automated video interviewing, it is important to consider other types of regulatory frameworks. In his prescient 1998 article, *Lex Informatica*, legal scholar Joel R. Reidenberg identified “three substantive legal policy areas” that he argued were “in a critical state of flux in the network environment,” similar to the instability early merchants faced as they navigated jurisdictions.²⁸⁵ Those areas were: “[t]he treatment of content, the treatment of personal information, and the preservation of ownership rights.”²⁸⁶ For merchants, the solution came in the form of “a distinct body of law known as the ‘Lex Mercatoria.’” Influenced by “[c]ustom and practices” of the trade, Lex Mercatoria acted “independent of local rules and assured commercial participants of basic fairness in their relationships.”²⁸⁷ Reidenberg argues that the rules of information technology can act in the same way. That is, in order to properly regulate information flows in the digital age, policymakers must first turn to “the set of rules for information flows imposed by technology and communication networks” which foster their own “Lex Informatica.”²⁸⁸

A true benefit of a Lex Informatica framework is that it “relies typically on *ex ante* measures of self-execution.”²⁸⁹ Unlike the current aspects of the U.S. legal regime, which some scholars have criticized as “backward-looking,”²⁹⁰ Lex Informatica “allows automated monitoring of information access and use,” preventing rule violations from ever occurring.²⁹¹ Whereas traditional law requires candidates to know a violation of their rights occurred in order to seek protection—a serious problem given the opaque nature of algorithmic decision-making—technological solutions under a Lex Informatica framework provide some assurance that such violations will not occur in the first place by, for one, addressing design elements that aid in discriminatory practices. This *ex ante* aspect is especially valuable given the permanent harms impermissible data use may inflict on candidates; just as spilled milk can never be fully

285. Reidenberg, *supra* note 13, at 554.

286. *Id.*

287. *Id.* at 553.

288. *Id.* at 554–55.

289. *Id.* at 581 (emphasis added).

290. Kim, *supra* note 7, at 867–68 (“Addressing the challenges of workforce analytics using a theory of classification bias also reveals the limitations of the backward-looking, liability-focused model of legal regulation embodied by Title VII.”).

291. Reidenberg, *supra* note 13, at 581.

returned to the carton, exposed data can never be fully recovered and protected, no matter what a court orders.

Applying a Lex Informatica framework to video interviewing means developing legislation that considers the capabilities of the technology itself rather than solely how the actors intend to use it or the use in practice. It is important to underscore here that Lex Informatica is not techno-solutionism. As Reidenberg emphasizes, rather than a replacement for all traditional regulation, “Lex Informatica must be seen as a distinct source of policy action. Effective channeling of Lex Informatica requires a shift in the focus of government action away from direct regulation and toward indirect influence.”²⁹² Reidenberg chiefly argues that government must seek to influence how technology is developed from its inception, thus impacting technological design and development by participating in “funding” to “regulate[] behavior and . . . standards,” rather than merely seeking to address just the consequences of technology.²⁹³

A. TREATMENT OF CONTENT

Applying a Lex Informatica framework to the video interviewing process also means considering the treatment of content acquired from candidates. I concur with legal scholars who have argued that the Uniform Guidelines on Employee Selection Procedures²⁹⁴ should apply in negotiating what content will be digested by automated hiring systems.²⁹⁵ Although the Uniform Guidelines are not law,²⁹⁶ they are seen as authoritative²⁹⁷ and have influenced decisions in employment discrimination cases.²⁹⁸

292. *Id.* at 586.

293. *See id.* at 588.

294. Uniform Guidelines on Employee Selection Procedures, 29 C.F.R. § 1607 (2021).

295. *See Sullivan, supra* note 7, at 420–22.

296. *Id.* at 422.

297. *See Griggs v. Duke Power Co.*, 401 U.S. 424, 433–34 (1971) (concluding that the EEOC’s interpretation of the guidelines should be given “great deference”); *see also Albemarle Paper Co. v. Moody*, 422 U.S. 405, 430–31 (1975) (observing that the “Guidelines draw upon and make reference to professional standards of test validation established by the American Psychological Association,” and that while the guidelines were “not administrative ‘regulations’ promulgated pursuant to formal procedures established by the Congress . . . they do constitute [t]he administrative interpretation of the Act by the enforcing agency”); *Gulino v. N.Y. State Educ. Dep’t*, 460 F.3d 361, 384 (2d Cir. 2006) (discussing how in 1978 the Uniform Guidelines replaced the original EEOC guidelines and has since become the primary, authoritative “yardstick by which we measure defendants’ attempt to validate [a standardized certification test]”).

298. *Sullivan, supra* note 7, at 422 n.106 (noting that per the results of a Lexis Advance search on December 10, 2017, “[t]he Guidelines have been cited in more than 300 cases, including a number of Supreme Court decisions.”).

The Uniform Guidelines are useful because they set standards for when selection criteria could be considered valid. Thus, the Guidelines provide for “three kinds of validation: criterion, content and construct.”²⁹⁹ The aim of all three types of validation is to prompt the employer to provide evidence of a predictive causal relationship between the selection method and the job performance:

Evidence of the validity of a test or other selection procedure by a criterion-related validity study should consist of empirical data demonstrating that the selection procedure is predictive of or significantly correlated with important elements of job performance. Evidence of the validity of a test or other selection procedure by a content validity study should consist of data showing that the content of the selection procedure is representative of important aspects of performance on the job for which the candidates are to be evaluated. Evidence of the validity of a test or other selection procedure through a construct validity study should consist of data showing that the procedure measures the degree to which candidates have identifiable characteristics which have been determined to be important in successful performance in the job for which the candidates are to be evaluated.³⁰⁰

I thus interpret the Uniform Selection Guidelines as requiring that: (1) the variables used by the automated video interviewing algorithm relate to important aspects of the job, (2) the data from the automated video allow for the prediction of future job performance, and (3) the selected candidates from the automated video interview have characteristics that can be identified as casually linked to superior job performance.

1. *Criterion Validity for Automated Video Interviewing*

The current iteration of automated video interviewing systems fails criterion validity. The Uniform Guidelines requires for criterion validity: “Evidence of the validity of a test or other selection procedure by a criterion-related validity study should consist of empirical data demonstrating that the selection procedure is predictive of or significantly correlated with important elements of job performance.”³⁰¹ However, as discussed earlier in the Article,³⁰² experts dispute whether empirical evidence supports the conclusion that automated video interviewing is predictive of important elements of job

299. *Id.* at 423 (citing RAMONA L. PAETZOLD & STEVEN L. WILLBORN, *THE STATISTICS OF DISCRIMINATION* §§ 5.13–.17 (2d ed. 2017–2018)).

300. *Id.* (citations omitted) (quoting 29 C.F.R. § 1607.5B (2018)).

301. Uniform Guidelines on Employee Selection Procedures, 41 C.F.R. § 60–3.5 (2021).

302. *See* Ajunwa, *supra* note 7, at 642–43.

performance, such as a “veracity” or “conscientiousness.”³⁰³ Thus, since it is disputed that automated video interviewing systems can measure these variables, these systems have not met the standard for criterion validity.

2. *Content Validity for Automated Video Interviewing*

Automated video interviewing systems are also on shaky ground when it comes to content validity. The Uniform Guidelines maintain: “Evidence of the validity of a test or other selection procedure by a content validity study should consist of data showing that the content of the selection procedure is representative of important aspects of performance on the job for which the candidates are to be evaluated.”³⁰⁴ Scholars have described automated video interviewing systems as attempting to decipher a wide range of behaviors and personality states.³⁰⁵ This invites criticism that some of the variables that the automated hiring system is attempting to capture are simply not representative of important parts of the job that candidate is seeking.

3. *Construct Validity for Automated Video Interviewing*

The construct validity of automated video interviewing systems also seems uncertain. The Uniform Guidelines declare:

Evidence of the validity of a test or other selection procedure through a construct validity study should consist of data showing that the procedure measures the degree to which candidates have identifiable characteristics which have been determined to be important in successful performance in the job for which the candidates are to be evaluated.³⁰⁶

This part gets into the error rates of automated video interviewing systems. Even if these systems have been programmed to be predictive of job performance and the variables used do represent important aspects of the job, questions remain about whether the programs work accurately. The black box nature of many automated decision-making systems makes answering these questions difficult. An audit in which non-selected candidates are compared to

303. See Ajunwa, *supra* note 7, at 663, 677, 685.

304. 41 C.F.R. § 60–3.5(B).

305. See Kate Crawford, *Artificial Intelligence Is Misreading Human Emotion*, ATLANTIC (Apr. 27, 2021), <https://www.theatlantic.com/technology/archive/2021/04/artificial-intelligence-misreading-human-emotion/618696/>.

306. 41 C.F.R. § 60–3.5(B).

selected candidates (in a longitudinal study) would be one way to confirm the accuracy of automated hiring platforms.³⁰⁷

B. TREATMENT OF PERSONAL INFORMATION

Lex Informatica provides a regulatory framework for the vast trove of biometric data subsumed in the automated interviewing process. Much of these data reveal demographic characteristics and are also personally identifiable information (PII) and are thus highly sensitive information that should enjoy heightened legal protection. One advantage of the Lex Informatica framework is that it recognizes the role that the technological capabilities of technological systems could play in regulation. As I previously discussed in another law review article, one great technological capability is that decision-makers could segregate demographic data prior to an employment decision.³⁰⁸ In the context of automated video interviewing, this could hide the video from the human decision-maker behind an information wall and only share the scores from the interviewing algorithm.

The technological capabilities of an automated hiring system also provide other mechanisms for protecting PII. For example, the system could be designed to work on access keys, which allow certain parties to view the information or that restrict access after a period of time. In addition, the data containing PII could be programmed to self-destruct after a period of time or if unauthorized access is attempted.

C. PRESERVATION OF OWNERSHIP RIGHTS: “PRIVACY AS TRADE SECRECY”

Other types of enforcement systems such as a property rights enforcement model for the data of automated video interview candidates could also be feasible under the Lex Informatica framework, especially under the prong that calls for the preservation of ownership rights. In *Privacy as Intellectual Property?*, Professor Pamela Samuelson considers that, chiefly, “a property rights model” of information privacy would both “establish a right in individuals to sell their personal data and thereby capture some of the value their data have in the

307. See Ajunwa, *supra* note 7, at 672 (citing O’NEILL RISK CONSULTING AND ALGORITHMIC AUDITING, DESCRIPTION OF ALGORITHMIC AUDIT: PRE-BUILT ASSESSMENTS 1, 1–2 (2020), <https://webapi.hirevue.com/wp-content/uploads/2021/01/oneil-risk-consulting-and-algorithmic-auditing-01-2021.pdf> (“On January 11, 2021, HireVue announced that it had brought in the auditing entity, O’Neil Risk Consulting and Algorithmic Auditing (‘ORCAA’), to conduct an audit of its video its algorithms considered. The report of the audit, however, left many questions unanswered. For one, ORCAA limited the audit to ‘pre-built assessments used in hiring early career candidates, including from college campuses.’”).

308. See Ajunwa, *supra* note 7, at 651.

marketplace” as well as “force companies to internalize certain social costs of the widespread collection and use of personal data now borne by others.”³⁰⁹ However, she acknowledges that property interests and privacy interests do not always align, as “individuals may not have just one interest in personal information, but many interests,” which may differ according to individuals or circumstances.³¹⁰

Therefore, Professor Samuelson suggests “an alternative market-oriented legal regime for protecting personal information” built on “a default rule providing individuals with certain rights to control the collection or processing of personal information about them while also providing individuals with the power to contract away this right (e.g., when they receive compensation for doing so).”³¹¹ Samuelson proposes that trade secrecy law, as opposed to intellectual property, offers a buildable model to start from, as it “facilitates license transactions in information, while . . . providing default rules to govern uses and disclosures of protected information, and setting minimum standards of acceptable commercial practice.”³¹² Essentially, if information privacy policy was rooted in trade secrecy, individuals would have the power to “license” rights to their data for limited uses in particular circumstances without running the risk that third parties data uses or disclosures violate the parties’ agreement.³¹³

Identifying and enforcing a property right in the data collected from video interview job applicants could be part of a Lex Informatica regulatory approach for automated video interviewing. A start is to formally identify the job applicant’s property right in the biometric data collected as part of automated video interviewing. This could be supervised by the EEOC as the employment standards regulatory agency³¹⁴ or under the FTC, which considers lawful uses for technology used as part of commerce.³¹⁵ Establishing such a property right would mean that the job applicant could retain control over what data could be acquired by the employer and that the job applicant could also constrain the use cases for the data. Exercising control of the data could mean that the job candidate signs a pre-interview contract that serves as a license to the biometric data for the prospective employer. Not only would

309. Pamela Samuelson, *Privacy as Intellectual Property?*, 52 STAN. L. REV. 1125, 1128–29 (2000).

310. *Id.* at 1171–72.

311. *Id.* at 1129.

312. *Id.* at 1152.

313. *See id.* at 1155.

314. *See* Ajunwa, *supra* note 7, at 667.

315. *See, e.g.,* Frank Pasquale, *Beyond Innovation and Competition: The Need for Qualified Transparency in Internet Intermediaries*, 104 NW. U. L. REV. 105, 155 (2010).

such a license explicitly outline the types of data that could be collected from the job applicant, but the license could also delineate the boundaries for use cases of the data.

To illustrate, in another law review article, I have detailed the risk of “algorithmic blackballing” that could arise from the unfettered access to the applicant data that automated hiring currently affords the employer.³¹⁶ This means that the applicant data collected as part of an interview for a failed employment bid could be resurrected during a second bid for employment and once again used to thwart employment. A regulatory regime wherein job applicants license interview data in exchange for consideration for, and solely for, the purpose of being considered for a specific job position would eliminate much of the danger of algorithmic blackballing. This is because the applicant could, through licensing, retain control over the shelf life of the data collected and could dictate a hard delete of the data after the first job attempt.

V. CONCLUSION

Humans have long judged each other by physical appearance.³¹⁷ From time to time, there have been efforts to elevate this practice into science.³¹⁸ Yet, at each instance, the scientific method has revealed no clear causative link between a person’s facial features, facial expressions, and their character.³¹⁹ With automated video interviewing, we see an attempt to routinize this human practice as a matter of business procedure, to quantify the practice of judging the character of humans by physical traits, and to delegate this practice to machines. If finding the right employee can be likened to the romantic selection process, then the use of automated video interviewing and concomitant facial analysis may be likened to the myth of Narcissus. As the legend goes, Narcissus rejected many romantic prospects and instead fell in love with his own reflection. While admiring his reflection in a pool, Narcissus fell in and drowned. Automated hiring systems may be seen as mirrors that reflect to us the racial, gender, and ableist biases present in our society, biases which dictate who would make the ideal employee. The bedrock legal principle

316. See Ajunwa, *supra* note 7, at 622–23.

317. See Pam Belluck, *Yes, Looks Do Matter*, N.Y. TIMES (Apr. 24, 2009), <https://www.nytimes.com/2009/04/26/fashion/26looks.html> (discussing the historical and modern role of physical appearance in human decision-making).

318. See Matt Simon, *Fantastically Wrong: The Silly Theory That Almost Kept Darwin From Going On His Famous Voyage*, WIRED (Jan. 21, 2015, 6:30 AM), <https://www.wired.com/2015/01/fantastically-wrong-physiognomy/> (discussing the long history of physiognomy, a pseudo-scientific field which purported one’s facial features betrayed their character).

319. See Sahil Chinoy, *The Racist History Behind Facial Recognition*, N.Y. TIMES (July 10, 2019), <https://www.nytimes.com/2019/07/10/opinion/facial-recognition-race.html>.

of equal opportunity in employment demands that the law should intervene. Given the limitations of traditional antidiscrimination laws to address the unlawfully discriminatory capabilities of automated hiring systems, a Lex Informatica derived framework, which provides a proactive ex ante approach of influencing design principles, would provide more meaningful governance of automated video interviewing systems.

