

Legal Liability in AI-Related Workplace Age and Disability Discrimination in the US

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I. INTRODUCTION

A) Research Background

On February 2nd 2023, Derek Mobley, an African American over the age of forty who had been suffering from anxiety and depression, filed a discrimination lawsuit against Workday Inc.,ⁱ a provider of artificial-intelligence-powered software for human resource management and business hiringⁱⁱ. The complaint alleges that Workday Inc.'s screening products “constitute a pattern and practice of discrimination” against job applicants on the basis of race, age, and disabilityⁱⁱⁱ. The case was described as “groundbreaking”^{iv} for being one of the first lawsuits to allege discrimination based on an employer’s use of artificial intelligence (AI) tools in hiring^v. However, the worrisome risk of AI hiring tools’ discriminatory effects is not a wholly novel issue.

Workday Inc. is neither the only nor the first company facing alleged AI discrimination issues. In 2018, Amazon decided to shut down its experimental AI-powered hiring tool after discovering that it showed bias against women^{vi}— four years after its intensive investment of expertise and input of “vast troves of training data”^{vii}. AI hiring tools were, by 2021, being used by approximately 55% of human resource leaders in the US^{viii} and 99% of Fortune 500 companies have AI-powered recruitment processes^{ix}.

The high prevalence of the usage of AI-powered hiring tools in the US is, however, contrasted by the public’s lack of knowledge of this technology even though it has the potential to impact their careers. According to the Pew Research Center, the majority of Americans (61%) have “heard nothing at all about AI being used by employers in the hiring process”^x. This prevalence is why this paper chooses the US as its national example.

Among the protected characteristics under US laws, age and disability discrimination deserve particular discussion in light of the discriminatory effects posed by AI recruitment.^{xi} Firstly, the use of AI in hiring disproportionately impacts job seekers with disabilities^{xii} who are more common among the elderly^{xiii}. According to the U.S. Department of Labor, by May 2023 the unemployment rate for the working-age population^{xv} with a disability is 8.3%; for nondisabled people, the rate is 3.2%^{xvi}. Disabled people, as defined by the United Nations Convention on the Rights of People with Disabilities (CRPD), are “those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their

full and effective participation in society on an equal basis with others”. Secondly, the demographic significance of the two minority groups justifies the prospective analysis this paper will carry out. People with disabilities constitute the largest minority group in the US today across people of all races, genders, colors, and socioeconomic statuses^{xvii}. It is “the only minority group that anyone can join through a change of circumstances”^{xviii}. Last but not least, in addition to the direct consequence of losing a potential job opportunity, age and disability discrimination, whether involving AI or not, could result in short or long-term unemployment, financial losses, and even mental illnesses^{xix}.

The link between disability discrimination and age discrimination is often significant. Although a disability can “occur at any point in a person’s life”, the U.S. Centers for Disease Control and Prevention found out that disabilities are more prevalent among “adults 65 years of age and older”^{xxi}. Therefore, this paper contends that separating disability and age into two distinct types of discrimination would be blurry and a collective discussion will serve to provide a more comprehensive understanding of the discrimination issue being discussed in this paper.

This research paper centers on the doctrine of **legal liability** in age and/or disability discrimination during the hiring process in the US. The significance of such an emphasis lies at both the individual and societal levels. Liability, as defined in the Black’s Law Dictionary, means “the state of being bound or obligated in law or justice to do, pay, or make good something.” Clear legal liability is the foundation of justice that ensures those responsible for causing harm are held accountable and provides a remedy for those who have been wronged^{xxii}. From the perspective of victims, merely identifying the risk of age and disability discrimination as posed by the adoption of AI-powered hiring tools is therefore far from being enough; what truly matters to the victims is who is/are to be legally responsible for the losses and/or harm the victim(s) suffer because of the age and/or disability discrimination. Victims get to seek remedies like damages and/or injunctive relief only if there is a clear designation and allocation of legal liability. In the realm of criminal proceedings, clear liability makes it possible to not only hold the perpetrators accountable but also have their wrongdoings morally condemned^{xxiii}—an announcement of the culpability of discriminatory behavior in hiring. On the other hand, for the vendors of AI-powered hiring tools and businesses who invest in adopting these tools in their hiring processes, clear legal liability would enable them to make informed decisions and invest with confidence^{xxiv}. While other legal systems manifest different ways of approaching

discrimination, the structural issues with AI as identified by this paper for the US apply to them as well.

Ultimately, humanity will want to develop AI for our own benefit, with the aim of creating a more efficient, fair, and comprehensive hiring procedure in the realm of employment. To this end, predictable discrimination liability standards in relation to AI hiring tools “may better spur innovation”^{xxv} and promote the advancement of AI-hiring tools.

B) Research Questions

This research paper aims to answer the following questions:

- 1) What are the current federal legal standards of US anti-discrimination laws when determining legal liability in AI-related age and disability discrimination during hiring?
- 2) How does the involvement of AI would create difficulties in establishing legal liability in age and disability discrimination during hiring?
- 3) What can we do to make liability establishment clearer in age and disability discrimination cases when AI is involved in the hiring process? How to prepare for the future with more prevalent usage of more advanced AI in hiring?

II. LITERATURE REVIEW

By examining existing US scholarship, this section will outline and explain the following preliminary questions for this research paper: a) the points of focus for existing scholarship discussing AI-liability in hiring discrimination in the US; and b) the questions which are left vague or unanswered by existing scholarship.

A) Current Scholarship

Recent studies on AI-related legal liability, firstly, are largely fixated on the discussion of more abstract and philosophical concepts that interact with legal liability. For example, some scholars probe the question of whether AI-powered programmes should/will be awarded legal personhood and thus “subject to suit”, or be treated as agents of other legal persons^{xxvi}. Another recent article pointed out the difficulty in establishing employer liability when AI is involved in the hiring discrimination allegation, by contending that “using AI in hiring to streamline the

process may be interpreted as a legitimate, nondiscriminatory reason for not selecting disabled candidates^{xxviii}. Furthermore, the World Economic Forum touches upon the issue of remedies and recommends “implementing the principle of joint and several liability to allocate damages”^{xxviii}. Other recent work also showed a focus on employment law and technology, such as the impact of technological development and its adoption on employees’ rights and power in the workplace^{xxix}.

B) Questions That Remain

The issue of AI-contributed age/disability discrimination have identified some of the difficulties for establishing legal liability in such several cases to date. However, existing discussions of the difficulties of establishing liability mainly focus on the sensibility and possibility of having AIs bear the liability. This is less relevant because, firstly, AIs have no assets and cannot be currently criminally punished. Plus, their use by employers would make them liable under the doctrine of *respondeat superior*^{xxx}, or to manufacturers under product liability doctrines. There is yet to be an analysis that focuses on examining the legal elements of relevant existing US federal laws to analyze the difficulties faced by current US federal legal standards in establishing legal liability when AI is involved in a hiring discrimination civil lawsuit. Also, there is a lack of focus on actions we can take to make the establishment of liability clearer in AI-involved age/disability discrimination cases in the context of hiring under current law, especially which takes AI advancement in the future into consideration.

Therefore, this research aims to understand how the involvement of AI would create difficulties (by both current and future AI hiring tools) for establishing legal liability in age and disability discrimination during hiring—focusing on the elements of the relevant offence, the burden of proof, the rule of evidence, and remedies under current US law. It is hoped that this paper could thereby use the resulting conclusions to address the third research question. To better tackle the second and the third research questions, this research will first ascertain the current standards of US federal age/disability discrimination laws used for determining legal liability in AI-related age and disability discrimination during hiring.

III. ANTI-DISCRIMINATION LAWS, AI, AND LEGAL LIABILITY

A) Current Federal Legal Standards

There is yet to be any federal law passed to specifically target AI-related hiring discrimination^{xxxii}. The main federal law that prohibits discrimination against job applicants above the age of 40 is the Age Discrimination in Employment Act of 1967 (ADEA). Addressing disability discrimination is the Americans with Disabilities Act of 1990 (ADA) and the Rehabilitation Act of 1973^{xxxiii}. The Civil Rights Act of 1991, an amendment to the Civil Rights Act of 1964, also provides safeguards against employment discrimination on the basis of disability and stipulates remedies.

Legal liability may be “generally divided into two broad categories: civil and criminal liability”^{xxxiiii}. In both categories, legal liability can be established if the elements of the offence are proven to be satisfied and have no defense. This section will ascertain the current standards of the aforementioned federal laws in determining legal liability in age and disability discrimination allegations by discerning the elements of the offence, the defence (if given), and remedies (if given) as presented in each piece of legislation. The rule of evidence as required in each of these laws will be extracted and discussed in the last part of this section collectively.

1. Age Discrimination in Employment Act of 1967 (ADEA)

The ADEA prohibits employment discrimination against persons 40 years of age or older. According to Sec. 4. (a)(1) of the ADEA, it is unlawful if an employer fails or refuses to hire any individual because of this individual’s age. Any person aggrieved “may bring a civil action in any court of competent jurisdiction”^{xxxv}.

To establish legal liability, as ruled in *Duffy v. Paper Magic Grp., Inc.*^{xxxvi}, a plaintiff under the ADEA must establish that he or she: “(1) was over forty years old; (2) was qualified for the position; (3) suffered an adverse employment action; and (4) was replaced by a person sufficiently younger to permit an inference of age discrimination”^{xxxvii}. However, even if these are successfully proven by the plaintiff, the employer may still avoid being held legally liable by invoking the defense of “business necessity”^{xxxviii} and/or “other reasonable factors”^{xxxix}. It is only when the plaintiff has

proved that the defendant, lacking any defenses, *willfully* violated the ADEA he or she is entitled to damages^{xxxix}.

2. Title I of the Americans with Disabilities Act of 1990 (ADA)

Title I of the ADA, which is effective for employers with 15 or more employees, prohibits an employer or employment agency from discriminating against qualified individuals^{xi} on the basis of disabilities^{xii} in regard to job application procedures and hiring^{xiii}.

With regard to the process and burden of proof for establishing legal liability and recovering remedies, plaintiffs under Title I of the ADA face similar burdens as those under the ADEA. To convince the court to recover remedies^{xliii}, the plaintiff has to prove that the defendant “has intentionally engaged in or is intentionally engaging in” an unlawful employment practice^{xliv}. Also echoing the ADEA, the defendant is given the opportunity under Title I of the ADA to invoke the defenses of “job-relatedness and business necessity” and/or “reasonable accommodation” against the plaintiff’s allegation of the defendant’s legal liability^{xlv}.

3. Title I of the Civil Rights Act of 1991 (CRA of 1991)

Unlike the ADEA or Title I of the ADA, Title I of the CRA of 1991 is remedy-focused and sets out a guideline for the plaintiff’s right of recovery, compensatory damages, and punitive damages within the US federal legal standards on unlawful discrimination during hiring^{xlvi}. The CRA of 1991 amended the Civil Rights Act of 1964 by inserting a section on “Damages in Cases of Intentional Discrimination”. To recover punitive damages, the plaintiff must demonstrate that the defendant^{xlvii} engaged in a discriminatory practice “with malice or with reckless indifference” to the plaintiff’s federally protected rights^{xlviii}.

The Burden of Proof and Evidentiary Standard in the Aforementioned Federal Laws

In civil cases, namely the civil proceedings that the aggrieved individuals bring against the defendants under the aforementioned federal laws, the aggrieved individuals (plaintiffs) bear the burden of proof.^{xlix} As an initial matter, the plaintiff has to meet the burden of production¹ and once met, the burden of production shifts to the defendant who then has the opportunity to provide evidence “either rebutting the plaintiff’s evidence or supporting the defendant’s own arguments”^{li}. The plaintiff then needs to meet the burden of persuasion—the standard of proof

of a preponderance of evidence—by convincing the act finder^{lii} that “the fact in dispute is more likely than not”^{liii} to have occurred.

B) *AI Hiring Tools: Friends or Foes?*

In addressing this question, this paper will analyse whether the involvement of AI hiring tools poses difficulties for current US federal legal standards in establishing legal liability and for the plaintiffs to recover remedies. This will be broken down into the difficulties created by **current** AI hiring tools and assumptive **future** AI hiring tools and be analyzed using real and hypothetical US legal cases.

1. Federal Legal Standards Facing Current AI-Powered Hiring Tools

The case picked for the analytical purpose of this section is *EEOC v. Novo Nordisk*^{liv}, a case concerning age discrimination. In January 2022, the EEOC filed a civil lawsuit on behalf of Deborah Hunter (Hunter), then 62 years old, against Novo Nordisk, Inc. (Novo) under the ADEA, claiming that Novo violated Section 4 of the ADEA. Specifically, the lawsuit claimed that Novo’s District Business Manager Marc Fujimoto (Fujimoto) denied Hunter a working position in Flagstaff, Arizona because of Hunter’s age. EEOC sought on behalf of Hunter, among other things, damages for the “willful conduct” alleged in the lawsuit.

In civil proceedings brought under the ADEA^{lv}, the ADA^{lvi}, and/or the CRA of 1991, the plaintiff bears the burden to establish the prima facie case^{lvii} of age and/or disability discrimination either by “direct evidence of discriminatory intent” or by meeting the *McDonnell Douglas* test in reliance of circumstantial evidence^{lviii}. Evidence is used to establish that the plaintiff “suffered an adverse employment action”, which includes among other things hiring decisions^{lix}. In EEOC’s claim, one of the primary grounds and factual allegations made and relied upon by Hunter is Fujimoto’s words to her stating that he (Fujimoto) wanted “someone who was going to be in the territory ‘long term’”^{lx}. Also, the complaint pointed out that a 33-year-old David Corson was later selected for the same position. The lawsuit was dismissed by the trial court for reason that the factual allegations set forth were not enough to raise a right to relief above the speculative level^{lxi}.

Now if we change the facts of the case a little and have the employment decision be reached by a modern-day AI-powered hiring tool, the EEOC, in such a new factual scenario, will only face greater difficulties securing a successful complaint. In the original court opinion, the reason given by the trial judge in support of his decision of dismissal was that Hunter failed to plead facts or “specific harms” indicating the denial resulted in harm^{lxii}. The judge also pointed out that for the court to conclude that Hunter is entitled to relief and survive the Motion to Dismiss filed by the defendant, the Complaint must include “enough factual matter” though the plaintiff does not have to set them out in detail^{lxiii}.

The major issue posed by these legal standards is ascertaining evidence of “willful violation”^{lxiv} of the ADEA. Currently, AI hiring tools are not used as independent hirers with full autonomy or complete decision-making power—human recruiters are still involved in the decision-making process, though the extent and methods this takes place varies in different companies. For the purpose of this paper, the human recruiter in Hunter’s scenario is solely in charge of the final in-person interview stage and does not collaborate with the AI in the preliminary hiring stages, including the CV-selection phase.

Assuming Hunter submitted her resume online to an AI-powered resume scanner and then suppose the AI scanner refused Hunter’s application for the position she applied to because it scanned her age and indeed decided, based on its training data and algorithms which are not accessible nor understandable to Hunter, that she does not fit into the proper age range for this position. Even though Hunter later may suspect her age as the reason behind the refusal when she learns that a younger applicant with similar qualifications got the position, Hunter very likely will struggle to discover evidence that could show the will and intent behind the decision. Proving the “will” when a modern-day AI is in this way involved in the hiring decision is challenging because the human hirers, though still involved in the hiring process, did not perform the reasoning that led to the decision of rejecting Hunter; the AI which *did* the “reasoning” and decision-making, on the other hand, has an opaque reasoning process. This is largely due to the nature of AI hiring technology. As a preliminary issue, current AI-powered CV scanners’ decision-making has its inherent limitation when judging a current candidate because it reaches its decision based on proxies, for instance by making comparisons and correlations to previous employees^{lxv}; proxies are, unfortunately, “bound to be inexact and often unfair”^{lxvi}. Unfair as they are, the logic behind the decision made by the AI-powered CV scanner can be “idiosyncratic, even baffling”^{lxvii}.

Unlike a human recruiter like Fujimoto, an AI resume scanner or AI interviewer does not offer comments as clear and blunt as “we want someone who will be with us in the ‘long term’”^{lxviii}. The feedback given by the AI in justification of its decisions, if any, is mostly general and would avoid comments related to protected characteristics. Therefore, together with the opaqueness of AI’s reasoning process, it is virtually impossible to ascertain the will or intention behind the decision to not hire Hunter and to find evidence about how the consideration of age played a part in the decision-making process. The involvement of AI hiring tools in the hiring process thus makes it more difficult for the plaintiff to provide evidence of discriminatory will and to even survive the Motion phase as in the case of Hunter.

Some may argue that the enactment of legal requirements to address AI decision-making and the development of “explainable AI” have solved the issue of finding evidence about intention. For example, the European Union’s 2016 General Data Protection Regulation (GDPR) dictates that individuals are entitled to “meaningful information about the logic involved” when they are impacted by decisions made through “automatic processing”^{lxix}. However, enacting such legislation does not in itself turn opaque decision-making explainable. The difficulties of ascertaining evidence of will and intention behind AI’s decision are still there. It is undeniable that the passing of such legislation can push changes on the technical side which is indeed moving towards the adoption of AI hiring tools with more clear and understandable decision-making processes. Explainable AI as a product of such an imperative refers to the “set of processes and methods that allows human users to comprehend and trust the results and output created [by the AI]”^{lxx}. Nevertheless, to believe that explainable AI has solved the issues for plaintiffs in producing evidence of intent, either direct or circumstantial, is simplifying the issue. Real-world guidance on how to “select, implement, and test” explainable AI is scarce^{lxxi} and experts still “struggle to understand and explain why particular [AI] systems make the decisions that they do”^{lxxii}.

2. Federal Legal Standards Facing Future AI-Powered Hiring Tools

A hypothetical will be devised for the purpose of this section’s analysis regarding the establishment of legal liability and entitlement to remedies.

Rudy Lee is a 55-year-old American-born Chinese who was diagnosed with autism at the age of 5. An ordinary graduate of an ordinary college, Rudy has a number of entry-level employment experiences with companies of different sizes.

On 7 July 2040, Rudy was made redundant by his last employer, the DuckyDuck, a retail company which was on the brink of bankruptcy. Eager to stay employed, Rudy immediately applied for an entry-level position at the BumbleBee, the fastest-growing retail company in the US.

BumbleBee has completely automated its entire hiring process and powered each hiring stage with AI hiring tools and zero human involvement. Aware of the existing anti-discrimination laws and product audit requirements as first propagated in the early 2020s, BumbleBee has all its AI-powered hiring tools pass the discrimination audit check. Different from human recruiters and their AI-predecessors in the early 2020s, these AI hiring tools are completely in charge of the hiring process at BumbleBee and make their hiring decisions based on candidate information drawn from every corner of the internet. The AIs used by BumbleBee are trained with a huge amount of legitimate data and information, taken legitimately from BumbleBee's own database, open-source data, and other companies' databases. The AIs are capable of conducting self-study, a similar but more sophisticated process compared to machine learning in 2023. In the decision-making process, the AI "recruiters" at BumbleBee base their decisions on factors and proxies that correlate and interact with each other incapable of being explained by humans.

A few weeks after sending out the online application forms (containing Rudy's age) and completing a video interview (in which Rudy was asked to open his camera and answer interview questions), Rudy received an email, also written by an AI at BumbleBee, notifying him that his application is unsuccessful. After unsuccessful attempts of conciliation, conference, and persuasion by the EEOC, Rudy decides to start a civil proceeding against the BumbleBee under the ADEA^{bcxiii}, the ADA, and the CRA of 1991.

For the purpose of this paper and this section's analysis, we will assume that Rudy is a qualified individual with regard to the position he applied to and is entitled to the protection of the ADEA, the ADA, and the CRA of 1991.

With the standards of legal liability the same as they were in 2023, Rudy will likely struggle to meet the legal standards to receive remedies. According to Section 7(b) of the ADEA, damages

shall be payable “only in cases of **willful violations**” of the Act. Similarly, hiring of the applicant or “any other equitable relief” may be available under Section 706 of the CRA of 1964 only if the court finds that the respondent has “**intentionally** engaged in or is intentionally engaging in an unlawful employment practice charged in the complaint”. Lastly, Section 1977A(b) of the CRA of 1991 makes it clear that the plaintiff may recover punitive damages against a respondent^{lxxiv} if the plaintiff demonstrates that the respondent engaged in a discriminatory practice or discriminatory practices “**with malice or with reckless indifference** to the plaintiff’s federally protected rights. The biggest problem in this scenario, and in the future, is how Rudy should deal with evidence of will, intention, malice, and recklessness when no human beings are involved in the hiring process at all.

In addition to the difficulties of providing evidence of the intent and the will to discriminate against Rudy on the basis of age and/or disability, as analyzed in the previous section, the autonomous decision-making of the AIs used by BumbleBee makes it difficult for Rudy to establish the causal link between the retail company’s consideration of Rudy’s age and disability and the actions taken by the company (i.e. refusing Rudy’s application). In *Gross v. FBL Financial Services Ltd. (2009)*, the High Court held that “the plaintiff must prove that age was the ‘but-for’ cause of the employer’s adverse action”^{lxxv}. Here, BumbleBee’s adverse action was to follow the decision to reject Rudy’s job application made by their AI. But establishing this causal link is likely onerous for Rudy. Firstly, it is hard to find the type of evidence that could show that BumbleBee indeed “considered” or has taken into account Rudy’s age and disability. Without verbal or textual communication between the two parties and without BumbleBee’s request for medical examination, the company may argue that it cannot be proved on a balance of probabilities that they used Rudy’s age and autism as the basis of the refusal and the decision was instead based on reasonable factors other than age or disability^{lxxvi}. Secondly, the BumbleBee can refute the causal link by arguing that even if they considered Rudy’s age and disability when making the decision of refusing his application, the consideration of Rudy’s age and disability was not the “but-for” cause. The company could cite other reasons to be the cause of the decision of rejection, for example “Rudy did not demonstrate speciality to a satisfactory standard”, and prove them to be “job-related and consistent with business necessity”^{lxxvii}.

Therefore, it is likely future AI hiring tools that have full autonomy in making hiring decisions will create difficulties for the current US federal legal standards in establishing legal liability in age and disability discrimination lawsuits for the plaintiff to receive remedies. This is mainly because,

in addition to the difficulties in proving the employer's will and intent, the challenges in establishing the causal link between rejecting the job applicant and the employer's consideration of the applicant's age and/or disability.

C) Looking into a Future with AI: How to Achieve a More Feasible Liability Regime?

1. Existing Efforts and their Limits

Many research institutions, private companies, and public sector organizations have started to take positions on the responsible use of AI^{lxxxviii}. Efforts are being made to target the root cause, in other words to prevent discriminatory or biased actions of AI in the first place. For instance, fairness metrics are being used in machine learning systems to detect whether an AI model is biased against specific attributes^{lxxxix}. Also, for the aim of enabling AI systems to “reasonably justify their decisions” and to ensure that the AI products comply with federal anti-discrimination laws, companies have been taking system audits^{lxxx} to “demonstrate compliance with preexisting and well-defined [legal] standards”^{lxxxii}. Microsoft Corp., an AI developer itself, has developed InterpretML to “achieve model explainability and support...black-box models”^{lxxxiii}. The tech giant also promises to achieve transparency for their AI tools so that the users could learn “what transformation logic was applied to the data”.

Nevertheless, these measures are not effective or sufficient enough. Firstly, the science behind fairness metrics itself is immature due to the complexity of its theoretical foundation: there has yet to be a consensus on the mathematical or statistical foundational definition for the so-called fairness metrics to develop a model that could be applied across the US to employers.^{lxxxiii} Therefore, the variety of metrics with different standards adds uncertainty on the part of job applicants in deciding whether there has occurred a discrimination issue due to the AI hiring tools. It also creates difficulties for regulators and courts when deciding the liability issue in discrimination complaints against AI-using companies that adopted fairness metrics but with different standards. Such uncertainties in turn affect job seekers' decisions and confidence about whether to resort to a civil lawsuit. Moreover, regarding the attempt of relying on system audit to demonstrate compliance with federal legal standards to prevent legal liability, there are “currently no standards for auditing AI systems at the scale necessary to ensure that they operate legally, safely, and at the public interest”^{lxxxiv}.

2. Some Proposed Measures

No matter whether the current US federal legal standards for age and disability discrimination will change in the future or not, a federal legal requirement of compulsory involvement of human “checkpoints” **during** the hiring targeting the decision-making processes will be beneficial for the victims to establish liability and receive remedies.^{lxxxv} Human reviewers should be placed to review the decisions made by their AI “co-workers” during and by the end of each hiring stage and formulate their own understandings and reasoning behind each hiring decision. In the *BumbleBee* hypothetical, a human reviewer would have been placed at the end of the CV-examining stage and video interview stage. Each of them will be given the AI-generated decision and corresponding analysis of Rudy’s performance during the respective stage of application. The reviewers are then required to either express their agreements with the AI-reached decisions and reasoning by submitting their electronic signature under statements like: “I herein confirm that I have reviewed and agree with the decision reached regarding applicant Rudy, who has characteristics as follows...during the CV-screening/video interview stage based on reasons as follows...”; or the human reviewers could disagree with and reverse the AI-reached decisions by inputting their own analysis. If the “AI hirer” give conclusions like “Rudy did not demonstrate speciality to a satisfactory standard” but did not provide concrete, detailed, or understandable explanations, the human checkpoints should examine Rudy’s CV or watch his interview recording themselves and input their analysis. In addition to keeping records of these signed statements and/or inputted analysis, *BumbleBee* should communicate and explain these to Rudy. With the human-signed analysis and application decisions (though originally generated by the AI hiring tools) and human-inputted analysis and decisions readily available and expressly communicated, Rudy would thereby face a much smaller obstacle of providing evidence to establish intention, will, or recklessness as well as causation.

Humans have the tacit knowledge that AIs lack, such as perception of the real world, intuition, and common sense^{lxxxvi}. Some may argue that there have been measures to increase the transparency of algorithmic decisions so putting humans in the hiring process will likely be redundant and a waste of money. While it is true that transparency of a rule “makes reviewing the basis of decisions more possible”, it is “not a substitute for an individualized review of particular decisions”. With the involvement of human checkpoints during the hiring process and

in light of their aforementioned responsibilities, it will help to mitigate the difficulties for the aggrieved applicants to argue for recklessness in establishing the employer's liability.

Furthermore, this paper suggests the creation of a federal legal right to request a human review **after** the final adverse decision was made by an AI-powered hiring tool. With a special task force performing this function for the applicants, there may be the benefit of remedying a discriminatory action soon after it is made, for example by arranging additional assessments conducted by human recruiters and explaining to the applicants the specific reasons behind their rejections, thereby reaching consensus with the rejected applicants on the hiring decisions and avoid the need for litigation^{lxxxvii}. Before the time when humans could understand the logic behind AI's decisions arrived, it is too early for us to exit the hiring process. At least for now, AI hiring tools should be developed to work in conjunction with human recruiters instead of being designed to replace them^{lxxxviii}.

IV) CONCLUSION

Hiring discrimination based on age or disability has long troubled the United States. For impacted populations, the most crucial priority is to receive remedies which in turn depends on the successful establishment of legal liability. The involvement of AI in the hiring process has however complicated the issue of legal liability and is likely to continue to do so. Though AI is not strictly speaking a newly emerged concept as its first discussion dates back to the 1950s, experts cannot yet fully grasp every single piece of logic behind it. Just like the algorithms that power AI, society's understanding of AI is still developing which inevitably includes learning from mistakes. This may indeed be a justifiable price to pay for the advancement of AI technologies that we hope could one day greatly empower humanity or fundamentally redefine the way we live, but equally if not more important is safeguarding the rights of those who may be negatively affected by the application of AI technologies in relative infancy.

By analyzing primary legislation, this work first ascertained the current federal legal standards in the establishment of liability for age and disability discrimination. Three federal laws—the ADEA, the ADA, and the CRA of 1991—constitute the legal framework for determining legal liability and awarding remedies for age and disability discrimination in the US. This paper then proceeded to analyse the difficulties and challenges faced by these current legal standards due to the involvement of AI in hiring. By using an altered real case and a hypothetical case, this paper

reached the conclusion that current and future AI tools create difficulties on the plaintiff's side to establish the defendant's liability: it will be difficult to provide evidence of will and intent with the involvement of current AI hiring tools that have opaque and ambiguous logic behind their decisions; future AI that has full autonomy and sole control over the hiring process will likely prevent the plaintiff from proving the necessary causal link for establishing legal liability. These difficulties in turn hamper the aggrieved parties' prospects for receiving adequate remedies.

In light of these analytical results, this paper proposes the creation of a legal requirement of compulsory "human checkpoints" **during** AI-powered hiring processes. Also, until humanity is capable of grasping the reasoning and logic behind AI's decision, a federal legal right to request human review for AI-reached hiring decisions **after** the final hiring decision is made will likely better serve the rights and interests of both the job applicants and the employers. The right to request human review will promote responsible employer practices and prevent litigation if the decision can be remedied after the revision. Eventually, as applicants have greater confidence in their ability to safeguard their rights and seek remedies, and the employers have greater certainty in when they may face discrimination litigation while using AI in hiring, there will likely be a more positive public view of AI's role in our lives that can push the advancement of this technology.

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The ADEA s 4 (f)(1): Age being “*a bonafide occupational qualification reasonably necessary to the normal operation of the particular business.*”
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The ADEA s 7 (b).
The ADEA s 7 (d)(1)
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ⁱ Gilbert, Annelise. 2023. “Workday AI Biased Against Black, Older Applicants, Suit Says.” *Bloomberg Law*. <https://news.bloomberglaw.com/daily-labor-report/workday-ai-biased-against-black-disabled-applicants-suit-says>.

ⁱⁱ For the purpose of this essay, artificial intelligence (AI) will be defined as the sub-field of computer science that trains computers to perform traditionally human tasks. Built on this definition of AI, “AI(-powered) hiring tools”, “AI recruitment”, and similar expressions as used in this paper will be construed as the algorithms, machine learning, and/or training datasets chosen by vendors and employers to automate hiring processes previously performed by humans. See Jones, Collin. 2022. “Systematizing Discrimination: AI Vendors and Title VII Enforcement.” *University of Pennsylvania Law Review* 171: 240.

ⁱⁱⁱ *Mobley v. Workday, Inc.*, N.D. Cal., No. 23-cv-00770.

^{iv} Morris, D. 2023. “Applicant Files Class Action suit Over Alleged AI Tool Discrimination in Hiring.” *National Law Review*, March 7, 2023. <https://www.natlawreview.com/article/applicant-files-class-action-suit-over-alleged-ai-tool-discrimination-hiring>.

^v To avoid any confusion, “hiring”, “the hiring process”, “recruitment”, and other similar expressions as used in the paper refer to the process of candidate engagement/sourcing, tracking, CV screening, pre-employment assessment, and interviews. See Nugent, S., Jackson, P., Scott-Parker, S., Partridge, J., et al. 2020. “Recruitment AI has a Disability Problem.” *Institute for Ethical Artificial Intelligence*, July, 2020.

^{vi} Dastin, J. 2018. “Amazon Scraps Secret AI Recruiting Tool that Showed Bias Against Women.” *Reuters*, October 11, 2018. <https://perma.cc/59PN-JDR3>.

^{vii} Jones, C. *Systematizing Discrimination*.

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^{ix} Fuller, J., Raman, M., Sage-Gavin, E., Hines, K., et al. 2021. “Hidden Workers: Untapped Talent.” *Harvard Business School Project on Managing the Future of Work and Accenture*. <https://www.hbs.edu/managing-the-future-of-work/Documents/research/hiddenworkers09032021.pdf>.

^x Rainie, Lee, Monica Anderson, Colleen McClain, Emily A. Vogels, and Risa Gelles-Watnick. 2023. “Americans' views on use of AI in hiring.” *Pew Research Center*. <https://www.pewresearch.org/internet/2023/04/20/americans-views-on-use-of-ai-in-hiring/>.

^{xi} For the purpose of this essay, age and disability discrimination in hiring will be defined as treating a qualified applicant less favorably because of his or her age or disabilities respectively; for example, excluding or denying job opportunities because of the individual’s age and/or known disabilities.

^{xii} Moss, Haley. 2021. “Screened Out Onscreen: Disability Discrimination, Hiring Bias, and Artificial Intelligence.” *Denver Law Review* 98, no. 4: 776-805.

^{xiii} UN Department of Economic and Social Affairs. n.d. “Aging and Disability.” *United Nations Website*. <https://www.un.org/development/desa/disabilities/disability-and-ageing.html>.

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^{xv} 16-64 years old.

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- ^{xvii} Moss, Haley, *Screened Out Onscreen*, 778.
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- ^{xix} Lee, Hyeon Ji et al. 2022. “The Association between Perceived Discrimination and Mental Health of Wage Workers with Disabilities: Findings from the Panel Survey of Employment for the Disabled 2016-2018.” *International journal of environmental research and public health* 19, no. 14 (July): 8541. <https://doi.org/10.3390/ijerph19148541>.
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- ^{xxi} Okoro CA, Hollis ND, Cyrus AC, Griffin-Blake S. n.d. *Prevalence of Disabilities and Health Care Access by Disability Status*.
- ^{xxii} See William S. Laufer and Robert C. Hughes. 2021. “Justice Undone.” *American Criminal Law Review* 58, no. 155: 156-204. <https://www.law.georgetown.edu/american-criminal-law-review/wp-content/uploads/sites/15/2021/01/Updated-58-1-Laufer-and-Hughes-Justice-Undone.pdf>.
- ^{xxiii} See R.A. Duff. 2011. “Responsibility Citizenship and Criminal Law.” In S. Green and R.A. Duff (eds) *Philosophical Foundations of Criminal Law*, 127. Oxford: OUP.
- ^{xxiv} Misha Benjamin, Kevin Buehler, Rachel Dooley, and Peter Zipparo. 2021. “What the draft European Union AI regulations mean for business.” 2021. *McKinsey*, August 10, 2021. <https://www.mckinsey.com/capabilities/quantumblack/our-insights/what-the-draft-european-union-ai-regulations-mean-for-business>.
- ^{xxv} Vladeck, David C. 2014. “Machines Without Principals: Liability Rules and Artificial Intelligence.” *Wash. L. Rev.* 89, no. 1: 147.
- ^{xxvi} Vladeck, David, *Machines Without Principles*, 124.
- ^{xxvii} Moss, Haley, *Screened Out Onscreen*, 797.
- ^{xxviii} Roderick Beudeker, Matthew U. Scherer, Kay Firth-Butterfield, Anne Flanagan, Matissa Hollister, Celeste Ang, Carlos Dodds, et al. 2020. “Employment Law and AI-Based Recruitment: A Close Examination of Existing Regulatory Gaps and the Path Forward.” *World Economic Forum*. https://www3.weforum.org/docs/WEF_Employment_Law_and_AI_Based_Recruitment_2020.pdf.
- ^{xxix} See Rogers, Brishen. 2023. *Data and Democracy at Work: Advanced Information Technologies, Labor Law, and the New Working Class*. The MIT Press. http://direct.mit.edu/books/oa-monograph/chapter-pdf/2085167/f000300_9780262373357.pdf.
- ^{xxx} Latin: “Let the master answer.”
- ^{xxxi} Wagner, Lindsey. 2022. “Artificial Intelligence in the Workplace: the Future is Now.” *American Bar Association*. https://www.americanbar.org/groups/labor_law/publications/labor_employment_law_news/spring-2022/ai-in-the-workplace/.
- ^{xxxii} The standards for determining employment discrimination and legal liability under the Rehabilitation Act are the same as those in Title I of the ADA. Therefore, this paper will only analyze the ADA for the purpose of answering the research questions. See The Rehabilitation Act of 1973, s 791. [Section 501] (g) Standards Used in Determining Violation of Section.
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^{xxxiv} The Age Discrimination in Employment Act of 1967 s 7 (c)(1).

^{xxxv} *Duffy v. Paper Magic Grp., Inc.*, 265 F.3d 163, 167 (3d Cir. 2001).

^{xxxvi} *EEOC v. Novo Nordisk* Civil Action No. 22-3482 (ZNQ) (RLS) 5.

^{xxxvii} ADEA s 4 (f)(1): Age being “*a bonafide occupational qualification reasonably necessary to the normal operation of the particular business.*”

^{xxxviii} ADEA s 4. (f)(1): “Differentiation is based on reasonable factors other than age.”

^{xxxix} See ADEA s 7 (b).

^{xl} A qualified individual is “an individual who, with or without reasonable accommodation, can perform the essential functions of the employment position that such individual holds or desires...[C]onsideration shall be given to the employer's judgment as to what functions of a job are essential, and *if an employer has prepared a written description before advertising or interviewing applicants for the job, this description shall be considered evidence of the essential functions of the job* (emphasis added)”. ADEA, Title I s 12111. [Section 101] (8).

^{xli} ADEA, *Editor's Note* <https://www.eeoc.gov/statutes/titles-i-and-v-americans-disabilities-act-1990-ada>.

^{xlii} “Title V of the ADA contains miscellaneous provisions which apply to the U.S. Equal Employment Opportunity Commission’s enforcement of Title I.” *Ibid*.

^{xliii} The court may enjoin the defendant from engaging in the unlawful employment practice, order reinstatement or hiring of employees, or “any other equitable relief”. The Civil Rights Act of 1964, s 706

^{xliv} *Ibid*. Note that “*The powers, remedies, and procedures set forth in sections...706...of the CRA of 1964 shall be the powers, remedies, and procedures this subchapter provides...to any person alleging discrimination on the basis of disability in violation of any provision of this chapter...*” The ADA, Title 1 s 12117. [Section 107] (a).

^{xlv} *Id*. s 12113. [Section 103] (a).

^{xlvi} See The CRA of 1991, s 1977A [42 U.S.C. 1981a].

^{xlvii} Other than a government, government agency, or political subdivision. See *id*, s 1977 A (b).

^{xlviii} *Ibid*. However, notice that in cases where the alleged discriminatory practice involved the “provision of a reasonable accommodation”, the plaintiff may not be entitled to damages where the defendant demonstrates “good faith efforts” in identifying and making a reasonable accommodation—a limitation on the plaintiff's right of recovery. *Id*, s 1977 A (a)(3).

^{xlix} “The standard that a party seeking to prove a fact in court must satisfy to have the fact legally established”. The Legal Information Institute of Cornell Law School. “Burden of Proof.” https://www.law.cornell.edu/wex/burden_of_proof.

¹ Which requires the plaintiff (and then the defendant) to provide evidence in the form of witness testimony, documents, or objects. See JUSTIA. 2022. “Evidentiary Standards and Burdens of Proof in Legal Proceedings.” <https://www.justia.com/trials-litigation/lawsuits-and-the-court-process/evidentiary-standards-and-burdens-of-proof/>.

^{li} *Ibid*.

^{lii} The fact finder can be: the jury in a jury trial, the judge in a bench trial, or an agent or committee as appointed in an official investigation. See Cornell Law School Legal Information Institute. 2022. “Fact Finder.” https://www.law.cornell.edu/wex/fact_finder.

^{liii} *Ibid*.

^{liv} 3:22-cv-3482

^{lv} See Cornell Law School Legal Information Institute. 2022. “ADEA.” https://www.law.cornell.edu/wex/age_discrimination_in_employment_act_adea.

^{lvi} See Equal Employment Opportunity Commission. n.d. “Titles I and V of the Americans with Disabilities Act of 1990 (ADA).” U.S. EEOC. <https://www.eeoc.gov/statutes/titles-i-and-v-americans-disabilities-act-1990-ada>.

^{lvii} “A prima facie case is the establishment of a legally required rebuttable presumption. A prima facie case is a cause of action or defense that is sufficiently established by a party's evidence to justify a verdict in his or her favor, provided such evidence is not rebutted by the other party.” Cornell Law School Legal Information Institute. 2022. “Prima Facie.” https://www.law.cornell.edu/wex/prima_facie.

^{lviii} “Circumstantial evidence is indirect evidence that does not, on its face, prove a fact in issue but gives rise to a logical inference that the fact exists. Circumstantial evidence requires drawing additional reasonable inferences in order to support the claim. For instance, circumstantial evidence of intentional discrimination can include suspicious timing, ambiguous statements, different treatment, personal animus, and other evidence can allow a jury to reasonably infer intentional discrimination.” Cornell Law School Legal Information Institute. 2022. “Circumstantial Evidence.” https://www.law.cornell.edu/wex/circumstantial_evidence.

^{lix} See *Duffy v. Paper Magic Grp., Inc.*, 265 F.3d 163, 167 (3d Cir. 2001).

^{lx} 3:22-cv-3482.

^{lxi} *Ibid.*

^{lxii} *EEOC v. Novo Nordisk* Civil Action No. 22-3482 (ZNQ) (RLS) 7.

^{lxiii} *Ibid.* at 8.

^{lxiv} ADEA, s 7(b).

^{lxv} Wennagel, Robert. 2022. “Dark Systems: Reprogramming Artificial Intelligence Regulations to Promote Fairness and Employment Nondiscrimination.” *Santa Clara High Tech L.J.* 39: 12.

^{lxvi} O’Neil, Carthy. 2016. “WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY 2.” cited in *id.* 14.

^{lxvii} Rogers, Brishen. *Data and Democracy at Work*, 63.

^{lxviii} 3:22-cv-3482.

^{lxix} Cited in Turri, V. 2022. “What is Explainable AI?” *Carnegie Mellon University SEI Blog*, January 17, 2022. <https://insights.sei.cmu.edu/blog/what-is-explainable-ai/>.

^{lxx} *Ibid.*

^{lxxi} *Ibid.*

^{lxxii} MARCUS, GARY & ERNEST DA VIS. 2019. “REBOOTING AI: BUILDING ARTIFICIAL INTELLIGENCE WE CAN TRUST”, 62. Cited in Wennagel, Robert. *Dark Systems*, 17.

^{lxxiii} Notice that: “No civil action may be commenced by an individual under this section until 60 days after a charge alleging unlawful discrimination has been filed with the Equal Employment Opportunity Commission.” ADEA s 7 (d)(1).

^{lxxiv} Other than a government, government agency or political subdivision. See The CRA of 1991, s 1977A (b).

^{lxxv} 557 U.S. 167, 129 S.Ct. 2343, 174 L.Ed.2d 119 (Gross).

^{lxxvi} See The ADEA, s 4 (f)(1).

^{lxxvii} See *id.* s 12113. [Section 103] (a).

^{lxxviii} Castelnovo A, Crupi R, Greco G, Regoli D, Penco IG, Cosentini AC. 2022. “A clarification of the nuances in the fairness metrics landscape.” *Sci Rep* 12:1–21. <https://doi.org/10.1038/s41598-022-07939-1>.

^{lxxix} IBM. 2023. “Fairness metrics overview.” *IBM Cloud Pak For Data Knowledge Center*. <https://www.ibm.com/docs/en/cloud-paks/cp-data/3.5.0?topic=openScale-fairness-metrics-overview>.

^{lxxx} Microsoft Corp. 2023. “Responsible and trusted AI.” *Microsoft Learn*. <https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

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- ^{lxxx} Jackson, Krystal, and Alisar Mustafa. 2023. “Creating Auditing Tools for AI Equity.” *Federation of American Scientists*. <https://fas.org/publication/creating-auditing-tools-for-ai-equity/>.
- ^{lxxxii} Ibid.
- ^{lxxxiii} See the conclusion of Castelnovo, *supra* note 77.
- ^{lxxxiv} Krystal, *supra* note 80.
- ^{lxxxv} “Human checkpoint” will be used interchangeably with “human review” in this paper.
- ^{lxxxvi} Wennagel, Robert. *Dark Systems*, 53
- ^{lxxxvii} Ibid.
- ^{lxxxviii} Wennagel, Robert. *Dark Systems*, 54