



Exploring the Role of AI in Career Access Through a Social Justice Lens

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ABSTRACT

The purpose of this paper is to explore the social justice implications for career guidance of the emerging technologies of career access. Emerging recruitment and selection practices – such as Artificial Intelligence (AI) analysis of candidates' social media presence and performance in interview, and the use of bots or virtual agents interacting with prospective candidates to evaluate, shortlist and profile them – demonstrate the complexity of contemporary career access in highly technological societies. Career guidance practice has become highly digitalised, and guidance practice likewise can include the use of AI. This paper compares the uses of AI in career guidance and in human resource management and provides an analysis of emerging practices through synthesis of the extant research. With the emerging practices sketched, the paper then outlines the social justice and ethical risks of the increased reliance on AI in career access. The analysis here highlights the need to consider how to avoid reinscribing existing inequities in the emerging digitalised processes of career access, education, and guidance. The nascent nature of AI augmented recruitment and guidance represents not only an educative opportunity for career guidance professionals but also suggests an advocacy role. As legislation and ethics around the use of AI for recruitment is underdeveloped there is an opportunity for career guidance professionals and educators to provide input into the ethical guidelines and regulation of the use of AI in employment and in their practice.

ABSTRAKT

Formålet med denne artikkelen er å undersøke hvilke konsekvenser de nye teknologiene for karriereveiledning har for sosial rettferdighet. Nye rekrutterings- og utvelgelsesmetoder – for eksempel kunstig intelligens (AI) som analyserer kandidatens tilstedeværelse på sosiale medier og deres prestasjoner i intervjuer, og bruk av roboter eller virtuelle agenter som interagerer med potensielle kandidater for å evaluere, velge ut og profilere dem – viser kompleksiteten i dagens karriereveiledning i et høyteknologisk samfunn. Karriereveiledningspraksisen er blitt svært digitalisert, og veiledningspraksisen kan også omfatte bruk av kunstig intelligens. Denne artikkelen sammenligner bruken av kunstig intelligens i karriereveiledning og personalforvaltning og gir en analyse av nye praksiser gjennom en syntese av eksisterende forskning. Etter å ha skissert den nye praksisen, skisserer artikkelen de sosiale og etiske risikoene ved økt bruk av kunstig intelligens i karriereveiledningen. Analysen belyser behovet for å vurdere hvordan man kan unngå at de nye digitaliserte prosessene for karrieretilgang,

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utdanning og karriereveiledning gjensker eksisterende ulikheter. Det faktum at rekruttering og veiledning ved hjelp av kunstig intelligens er i sin spede begynnelse, representerer ikke bare en utdanningsmulighet for karriereveiledere, men ogs  en mulighet til   p virke. Ettersom lovgivningen og etikken rundt bruken av kunstig intelligens i rekrutteringsprosessen enn  ikke er ferdig utviklet, har karriereveiledere og l rere en mulighet til   bidra til utforming av etiske retningslinjer.

INTRODUCTION

With the event of what has been termed the ‘Fourth Industrial Revolution’ bringing digitalisation and automation of work (Hirschi, 2018), not only has the types of paid work available and access to this changed but so has the provision of career education and guidance (e.g. Hooley, 2019). Emerging recruitment and selection practices – such as Artificial Intelligence (AI) analysis of candidates’ social media presence and performance in interview, and the use of bots or virtual agents interacting with prospective candidates to evaluate, shortlist and profile them (Albert, 2019) – demonstrate the complexity of contemporary career access in highly technological societies. Career guidance practice has likewise become increasingly digitalised (e.g. Fusco et al., 2020), and career guidance practice can likewise include the use of AI (e.g. Westman et al., 2021; Wilson et al., 2022). The purpose of this paper is to explore the social justice implications for career guidance of the emerging technologies of career access. To achieve this, the digitalisation of career guidance is firstly described. This is followed by an exploration of the emerging uses of AI in Human Resource Management (HRM). In the following section, the ethical risks and social justice implications of use of AI in career access and guidance are then explored. The analysis highlights the need to consider how to avoid reinscribing existing inequities in the emerging digitalised processes of career access, education, and guidance. The paper concludes by outlining how the nascent nature of AI augmented recruitment, selection and guidance represents not only an educative opportunity for career guidance professionals but also suggests an advocacy role. As legislation, policy, and norms around the use of AI for recruitment is still developing there is an opportunity for career guidance professionals and educators to provide input into the ethical guidelines and regulation of the use of AI in employment and in their practice.

AI, in this context, is understood as digital systems that when given a goal, operate by perceiving their environment through data acquisition, interpreting the collected data, reasoning on the knowledge or information processing derived from the data, and acting to achieve the goal (European Commission, 2020). AI systems contain algorithms that were developed to mimic human intelligence and are mechanisms for decision-making based on a set of rules (European Commission, 2020). In other words, AI refers to technology that allows computer systems to ‘perform tasks that would otherwise require human intelligence’ (Wilson et al., 2022, p. 48). If social justice is considered to be the socially just distribution of society’s resources (Bengtsson, 2022), then a career can be considered a societal resource. This paper explores how the use of AI in HRM and career guidance can impact career access. Given the emerging research (e.g. Harvis-Nazzario, 2022; Hunkenschroer & Kriebitz, 2023) which reveals the built-in bias of AI-based systems the potential for the reproduction of inequity needs to be acknowledged.

THE DIGITALISATION OF CAREER GUIDANCE

Technological development has created new forms of work, living, and learning. As a profession, career guidance has historically incorporated a range of available technologies into the work of its practitioners (e.g. Hooley, 2019) supporting clients in their transitions into, and through the market (Bimrose & Brown, 2019). Whilst traditionally career guidance is understood as describing a face-to-face one-on-one counselling session where a career professional supports the learning and career reflection of an individual, this is but one of many forms of available interventions; alternatives include classroom-based career education, workshops in workplaces, experiential activities and the provision of information and interaction online (Hooley, 2019). The development of the Internet has led to ‘an explosion of tools, techniques, and initiatives’ (Hooley & Staunton, 2020, p. 298) that used internet-based technologies for career guidance. Such tools can provide

valuable information and insight into various career paths, including job outlooks, required skills and education, salaries, and opportunities for advancement. Where demand for career guidance exceeds service availability, these technological initiatives can augment and provide alternatives to traditional modes of guidance (Kettunen et al., 2020; Leung, 2022).

Given the advancement in digital technologies that have been incorporated into career guidance a framework is useful for understanding and describing the technological trajectory. Sampson and Osborn described three types of ICT applications in career development: computer-assisted career assessment; computer-assisted career information; and computer-assisted career guidance (Sampson Jr. & Osborn, 2015). With the development of large language model-based AI, this typology no longer remains current as AI can assist job seekers and career professionals in ways that do not neatly fit these categories. To contemporise this nomenclature, I use the term 'digital', rather than computer-assisted, and further classification – 'digital career coaching and support systems' to provide a fuller account of the ways in which career guidance continues to be digitalised. The digitalisation of career guidance is evident in the proliferation of digital career assessment systems, digital career information systems, digital career guidance systems and in the emergence of digital career coaching and support systems.

DIGITAL CAREER ASSESSMENT SYSTEMS

Digital career assessment systems are contemporary adaptations of traditional paper-and-pencil career development instruments administered on digital platforms. Such tools have their origins in the work of Frank Parsons and are underpinned by psychological theories used in career guidance such the trait-factor approach, where the aim is to help individuals learn about themselves (their traits), learn about available careers and choose from those that match their traits (Leung, 2022). Digital technologies allow for rapid scoring of assessment, a high degree of accuracy in scoring, personalized test results interpretation, and visually enhanced presentation of profiles (Leung, 2022). Digital assessments have evolved with the changing affordances of available technologies. Computer programs offering assessment of personality and/or vocational interests have been supplanted by web and mobile app-based assessments which have been adapted to offer forced-choice response formats, the provision of pictures alongside descriptions of occupations, and the use of emojis instead of rating scales, gamification, simulation (e.g., virtual reality) as assessment, and assessment by AI of individuals based on their social media posts (e.g. Nye, 2022).

DIGITAL CAREER INFORMATION SYSTEMS

The delivery of career information dates back to the beginning of industrialisation (Borbély-Peczé, 2020). Now the provision of career information is an 'integral component' of career education and guidance (Milosheva et al., 2021). Digital career information systems are platforms that provide occupational, educational, employment, and job-related information. With digitalisation such information can be presented in different media formats, including but not limited to written narratives, videos, and simulations, and interactive websites (e.g. Leung, 2022). The success of digital career information provision has been found to be contingent on how well these are connected to traditional career services (Vigurs et al., 2017).

DIGITAL CAREER GUIDANCE SYSTEMS

Digital career guidance systems provide an opportunity for career exploration by connecting career assessment tools with career information (e.g. Leung, 2022; Osborn et al., 2021). Inputs and outcomes from the assessment inform and interact with the information presented to help users make informed career and educational choices (e.g. Leung, 2022). Leung (2022) argues that digital career guidance systems have the potential to engage and serve the needs of new generations of digitally connected users. While digital career guidance systems have been found to be effective in helping to solve career problems (Osborn et al., 2021), research by Kettunen and Sampson (2019) indicates a lack of readiness by some career service providers in the use of digital career guidance systems due to inadequate ICT infrastructure; a lack of up-to-date information; a lack of ICT competencies and skills; and insufficient integration between ICT and service providers. The COVID19 pandemic showed the value of digital career guidance systems as practitioners were able to provide online service delivery to users in a variety of modes – self-help, brief assisted, and individual case management (Osborn et al., 2022).

Career education and guidance has reached another stage of digitisation with the emergence of digital career coaching and support systems. With the increasing availability of user-friendly large language model (LLM) generative AI apps, individuals can readily access tools that can be used to support them (Haleem et al., 2022) in the development of their careers. These tools can overcome the previously noted limitations of highly complex non-adaptive career guidance systems that are difficult to maintain (Cedefop et al, 2021; Mehraj & Baba, 2019). According to Kelly (2023, p. na), LLM generative AI-based apps have the potential to:

- Review a jobseeker's resume and provide general input on grammar, spelling, layout, readability, content, and keywords (when compared with a job advertisement). ChatGPT can even be asked to pick up any red flags or weak spots that a recruiter may identify.
- Help candidates identify their skills and strengths from their outlined work experience or past activities.
- Suggest potential jobs or careers suited to a specified set of skills or offer similar alternative paths to a specific job.
- Identify skills sought for a particular job title.
- Find recruiters in a particular sector or geographical area.
- Research an organisation; its employee reviews, values, competitors, or core products.
- Generate conversation starters for networking.
- Assist in creating a cover letter, e-note or thank you note.
- Assist in salary research.
- Support interview practice by prompting common questions or helping a job seeker summarise or refine their answer.
- Help a jobseeker create an elevator pitch, their LinkedIn summary, and LinkedIn posts or assist with writing other online profiles or career biographies.

Such apps are not without its limitations for job seekers (these may generate false information; could produce harmful, discriminatory, misleading, or biased content; reliance on such apps could be perceived as unethical and may harm job seekers' credibility; these pose a privacy risk; apps may not be up to date with industry norms and emerging trends; and asking the wrong questions can render the responses unhelpful or misleading) (Haleem et al., 2022; Kelly, 2023). While noting that users need to ensure they undertake their own research, thinking, preparation and exercise due diligence, Kelly states that she'd 'also love to see them [jobseekers] partner with a career practitioner who may be able to challenge, guide and support candidates in safe ways to use [such tools] for career applications' (Kelly, 2023, p. na). The next step in the digitalisation of career guidance is career practitioners educating people in the use of AI tools as a support system for career access and development. Careers practitioners can make use of these technologies to co-create chatbots to work with clients (Cedefop et al, 2021) and AI can be used in career education to support students with developing skills such self-regulation and motivation, and provide personalised learning support, feedback, assessment, profiling and prediction and competence management (Westman et al., 2021). Career guidance professionals will need to understand the potential and the limitations of such tools to support people in their use (Wilson et al., 2022), and to continue in the tradition of utilising contemporary technology in their practice.

Westman et al. (2021) propose a conceptual model for understanding the ways that AI can be used to support career guidance: AI as coach, AI as collaborator; AI as assistant; and AI as tool. However, such uses of AI come with risk and the potential for harm. 'Algorithmic decision-making might also lead to the unfair treatment of certain groups of people, implicit discrimination and perceived unfairness' (Köchling & Wehner, 2020, p. 795) even in systems designed to provide education and guidance. The use of prediction in the determination of the appropriate information or options to give a user is predicated on data (which reflects past performance and historical occurrences) which forecloses particular possibilities and is reproductive rather than transformative. Career guidance is relational, and AI disrupts relational systems, as relations are mediated via the programming driving the algorithm. An AI tool is only as good as its programming, the assumptions underpinning the algorithm, and the data that the decision making is based upon. Given these limitations of AI systems, guidelines are needed for the development of career-focused AI coaching and support tools. Before examining what such guidelines might consist of, the following section examines the ways in which AI is being used in HRM.

With the increasing demand for skilled employees in various industries, organisations are reportedly turning to artificial intelligence (AI) to enhance their human resource management (HRM) functions (e.g. Vrontis et al., 2022), particularly in the areas of selection and recruitment, a process termed 'Digital Recruiting 3.0' (Chen, 2022). AI, as represented in the literature (Bondarouk et al., 2017), can help streamline the recruitment process by analysing resumes, identifying suitable candidates, and conducting initial interviews. This has the potential to save HR managers a lot of time, effort, and money, allowing HR personnel to spend their time on strategic rather than administrative tasks (Bondarouk et al., 2017). AI can provide an effective way to manage the large quantities of data generated during recruitment and selection processes. In addition, it is claimed that AI-based screening systems can help eliminate cognitive biases that may affect the selection process (Chen, 2022).

The use of AI in HR is seen as a panacea offering competitive advantage and savings in costs and time, a minimising of risks, enhanced productivity, increased certainty in decision making, diminished human bias, and consistency and fairness in recruitment procedures (Köchling & Wehner, 2020; Pillai & Sivathanu, 2020). However, there is a growing debate in the academic community regarding the efficacy of different types of AI tools and the benefits that they offer the business community (Budhwar et al., 2022). Against optimistic initial indications of cost-effectiveness, improved employee commitment, satisfaction (Malik et al., 2022), and acceptance by stakeholders (Chen, 2022; van Esch et al., 2019), questions are being raised regarding the complexity of HRM, the reliability of small data sets, and the accountability, ethical and legal issues associated with AI-based decision-making (e.g. Budhwar et al., 2022; Tambe et al., 2019). Calls have been made for empirical studies to inform future development in the use of AI for recruitment and selection (Bondarouk et al., 2017).

Enholm et al. (2022) note that businesses are struggling to leverage the potential of AI. It is difficult to ascertain the degree to which AI is being utilised; practitioner literature is overly optimistic whilst academic literature is scarce (Albert, 2019). To investigate the use of AI in recruitment and selection, Albert reviewed the available practitioner literature and verified the findings through interviews with recruitment and selection specialists such as HR managers, consultants, and academics. Albert identified eleven types of AI-applications being used in recruitment and selection. These are detailed in Table 1. Table 1 includes a description of the types of AI tools being employed, the problem such tools are being used to solve, the solution they purport to provide, the potential outcomes, and the key tasks undertaken by the AI tools.

Albert (2019) found that while many companies were using AI in recruitment and selection, this use was not extensive and chiefly clustered around the use of chatbots/CRMs, admin-related task automation and screening software (CVS and videos). As can be seen in Table 1,

AI TOOLS USED IN RECRUITMENT				
AI TOOL	PROBLEM	SOLUTION	POTENTIAL OUTCOME	AI TASK
Employer branding monitoring	Reputation impacts candidates' perceptions of potential employer. Bad reputation leads to smaller talent pool	Software scans public data to assess sentiment and identity weaknesses in the hiring process	Stronger employer brand improves quality of talent pool, reduces time to hire, staff turnover and costs	Sentiment monitoring Prediction
Vacancy prediction software	Cost of spontaneous resignations	Software identifies employees' behavioural data and makes prediction on likelihood to leave.	Improved talent attrition Improved employer brand Reduced time to hire	Prediction
Job description optimisation software	Complex jargon, boring descriptions, and indirect discrimination can negatively affect diversity, application volume and employer brand	Software provides recommendations to optimise job descriptions and tailor language for different types of candidates	Improved diversity Reduces risk of indirect discrimination Higher candidate engagement	Communication

Table 1 AI Tools and their application in the recruitment and selection process.

(Adapted from Albert, 2019, pp. 217–8).

AI TOOLS USED IN RECRUITMENT

AI TOOL	PROBLEM	SOLUTION	POTENTIAL OUTCOME	AI TASK
Targeted advertising optimisation	Wrong message via the wrong channel to wrong audience wastes resources	Using insights from AI, machine learning and data insights firms can accurately target relevant candidates	Improved candidate experience Maximises chances of candidate engagement Minimises advertising costs	Prediction Communication
Multi-database candidate sourcing	Untapped potential of suitable passive candidates and former employees reduces talent pool quality	AI-tools scan through multiple databases, including social media profiles, faster than human recruiter	Accelerates candidate sourcing rate Frees up recruiters' time Improves quantity and quality of available talent pool	Judgement
Candidate engagement chatbot/CRM	Direct recruiting and relationship management are expensive and time consuming. High volume can lead to delayed responses, dissatisfied candidates and/or poor employer reputation	Chatbots use Natural Language Processing to mimic human conversation and can be used to engage candidates, and provide real time, any time responses to guide candidates through the recruitment process	Frees recruiters' time Reduces costs	Procedural Communication
Automated scheduling	Scheduling calls, tests, interviews, or meetings is time consuming	AI system can automatically execute these admin tasks	Frees recruiters time for other tasks	Procedural

AI TOOLS USED IN SELECTION

AI TOOL	PROBLEM	SOLUTION	POTENTIAL OUTCOME	AI TASK
CV screening software	Reviewing CVs is time consuming and costly. Human error increases as the number of CVs increases	Software instantly reviews a large volume of VCs to filter out unsuitable candidates and rank suitable ones	Reduces bias and issues of human fatigue Improves diversity Reduces costs Frees recruiters' time	Judgement
Video screening software	Pre-screening interviews are costly, biased, and time-consuming	Software analyses video interviews to assess person-organisation and person-job fit	Reduces human error, bias and discrimination Frees up recruiters time	Judgement
AI-powered psychometric testing	Outdated, boring and unengaging tests lead to negative candidate experience and impacts employer branding	AI provides engaging tests designed to improve candidate experience while assessing candidate	Frees up recruiters' time Improves workplace diversity	Judgement
AI-powered background checking	Time consuming, prone to human error and can lead to problematic employee termination downstream	AI software scans through multiple databases to check candidates criminal record, credit rating and references	Frees up recruiters' time Reduces costs from human error	Procedural Judgement

the task undertaken by the AI application varies depending upon the tool. Some tools are completing tasks that are based on prediction or automation of procedures, whereas other processes require the AI tool to exercise judgement. For example, in terms of AI tools exercising judgement, companies can request candidates to send in a video of themselves as part of the application process. AI software can analyse the short video and provide a report on candidates' demonstrated personality traits and compare these with the competencies required for the role – it is argued that such applications can lead to improvements in person-job fit, and person-organisation fit (Chen, 2022). AI can also analyse potential candidates' social media profiles and digital footprints and provide a report on their personality (Peshkova, 2022; Valanarasu, 2021). For businesses, the use of such tools provides a competitive advantage (Malik et al., 2022; Suseno et al., 2022) – it is claimed that AI tools outperform humans in screening resumes by at least 25% (Chen, 2022). Faliagka et al. report that an AI-based recommendation system performed consistently compared to human recruiters and can be trusted for the automation of applicant ranking and personality analysis (2014). Such AI-based systems are able to standardise applicant sourcing and resume screening processes (Garg et al., 2021). Whilst applications that automate procedures (such as background checking and using a chatbot to step candidates through the application process) and administrative tasks (such as scheduling interviews) are less controversial, selection tasks where AI tools exercise judgement involve ethical and legal risk and have social justice implications. These are described in the following section.

THE ETHICAL RISKS AND SOCIAL JUSTICE IMPLICATIONS OF USING AI TOOLS FOR RECRUITMENT AND SELECTION

While the use of AI systems reduces human and cognitive bias (Chen, 2022) this can be replaced with algorithmic bias (Harvis-Nazzario, 2022). 'Algorithmic bias exists because there is both cognitive bias and a lack of complete data that does not represent an entire population. These two areas are inter-connected. If the training data is biased, not fully representative, or inaccurate, the predictive models will be flawed, producing inequitable results' (Harvis-Nazzario, 2022, p. 145). By way of example, Amazon famously discontinued its AI-based selection program in 2018 because it was found to be discriminating against women (Hunkenschroer & Kriebitz, 2023); due to algorithmic bias the AI was reproducing historic (biased) hiring patterns. While several of the AI based solutions for recruitment and selection are relatively innocuous (such as those that automate interview scheduling, for example) the tools that involve an AI system exercising judgement regarding candidate suitability involve algorithmic bias and pose increased ethical risk. There are social justice implications too, as the early adoption by large companies revealed biases against not only women, but also people of colour making the attainment of equity, diversity, and inclusion goals more difficult (Budhwar et al., 2022).

THE ETHICAL RISKS OF USING AI IN RECRUITMENT AND SELECTION PROCESSES

The ethical risks of using AI in recruitment and selection occur when the process does not take into account ethical principles. The ethical principles involved in recruitment and selection processes include transparency, accountability, autonomy, fairness, non-discrimination, and privacy.

- **Transparency:** Candidates need to know what AI tools are being used, what data is collected about them and should be provided with an opportunity to verify such information (Budhwar et al., 2022). There should be transparency about the decision-making processes, even when such decisions are outside the control of individuals. The right to be told the process by which a decision was reached and the right to lodge a complaint when candidates feel treated unfairly make it necessary for AI recruiting to be transparent (Hunkenschroer & Kriebitz, 2023).
- **Accountability:** Candidates need to know how AI-based decision-making affects their outcomes (Budhwar et al., 2022). The use of AI-tools carry an epistemic risk that no one can provide a rationale for a given decision and a culpability risk that no one can be held responsible for a given decision (European Commission, 2020).

- **Autonomy:** AI potentially reduces human involvement, as human beings cede decision-making or analytical tasks to AI-based automated systems. This means specific applications of AI potentially conflict with the right to human self-determination if they render certain choices obsolete. Therefore, AI recruiting tools should only be used to the extent that they do not limit human autonomy, so as not to conflict with human dignity and the right to occupation (Hunkenschroer & Kriebitz, 2023).
- **Fairness:** Wachter et al. argue that fairness cannot be automated (2021). The susceptibility of AI tools to algorithmic bias demonstrates the difficulties of ensuring fairness. Drage and Mackereth (2022) argue that AI-powered hiring tools are inherently unfair, noting that attempts to remove race and gender from AI systems often misunderstand these, treating them as isolatable attributes rather than being enmeshed in broader systems of power. Additionally, the attempted outsourcing of “diversity work” to AI tools may (unintentionally) entrench cultures of inequality and discrimination through failure to address the systemic problems within organizations. They describe how the racialised history of character analysis and its associated processes of classification and categorization are a part of longer histories of taxonomical sorting and reflect the current demands and desires of the job market rather than representing a ‘fair’ system (Drage & Mackereth, 2022).
- **Non-discrimination:** Data sets are susceptible to many types of bias increasing the likelihood that AI that is reliant on historic data will fail in realizing its aims. If a decision made by AI impacts human beings, especially in the selection of job candidates, AI might lead to discrimination (Hunkenschroer & Kriebitz, 2023). If recruitment and selection processes are dependent upon analysis of candidates’ social media profiles, those candidates without public profiles may be discriminated against.
- **Privacy and data privacy:** AI decisions are typically based on the input of specific data. The input used by an AI solution could conflict with the right to privacy if the data was obtained without the applicant having consented to its use. This risk is magnified by AI’s ability to access applicants’ personal information using, for example, facial recognition software, or social media/digital footprint data mining (Hunkenschroer & Kriebitz, 2023).

Hunkenschroder and Kriebitz (2023) argue rather than being inevitable, the risks related to AI recruiting are a result of inflated expectations and the unreflective use of AI recruiting tools. They state that ethical AI recruitment is possible, but it presents a daunting and complex challenge for businesses.

APPLYING A SOCIAL LENS TO EXPLORE THE USE OF AI IN RECRUITMENT AND SELECTION

The brief overview above of the risks posed by the use of AI-powered hiring tools suggests that dependence upon such tools represents an ethical risk through the violation of individuals’ rights (e.g. privacy, fairness, autonomy, etc.) and comes with the risk of algorithmic discrimination. Additionally, the embedding of specific AI-tools in the application processes presupposes a level of technological skill and awareness by candidates. This raises questions about whether the use of AI in recruitment and selection is socially just.

Social justice can be understood as the socially just distribution of resources in society (Bengtsson, 2022). Such resources could include access to education and services to enable individuals to live a meaningful life, for many this would involve access to employment. Bengtsson (2022) suggests that to this idea of social justice, we could add access to information; individuals’ capacity to share information and experiences is essential for being able to participate in the knowledge economy operating in our technological society. In this context socially just career guidance can intervene through the provision of information and building individuals’ capacity to share information, and access employment. However, is the provision of information enough when career access is mediated through AI-powered hiring systems that are arguably incapable of fairness (Wachter et al., 2021)? If we consider the concept of agency, broadly understood as ‘the capacity of persons, or subjects, to deliberate or reach decisions and to act upon those deliberations or decisions to effect intentional change’ (McCrory, 2022, p. 504) it seems that AI-systems can exercise agency given that they are capable of exercising judgement regarding candidates’ suitability based on their application, video interview and/or social media presence.

How are candidates to negotiate AI systems that are agentic in this context? One way of determining whether such use of AI is appropriate is offered by the concept of epistemic justice.

Epistemic injustice has been defined as ‘wrong done to someone specifically in their capacity as knower’ (Fricker, 2007, p. 1). Fricker describes two forms of epistemic injustice: hermeneutical and testimonial injustice (Fricker, 2007; 2013). Hermeneutical injustice is a systemic injustice where the experiences of a particular social group are not understood due to prejudicial structural injustices. In terms of the use of AI in career access, this form of injustice was evident in the experiences of women in the Amazon AI selection process. Testimonial injustice is situationally based and occurs when a ‘knower’s’ testimony is not seen as credible due to the way the knowledge is presented (Fricker, 2007). There is potential for AI selection systems to perpetuate testimonial injustice when judging video interviews and assessing social media presence. The judgment exercised by AI systems is limited by the data such systems are trained on, homogenous data will lead to the exclusion of minority groups, including people of colour, gender non-conforming people, and neurodivergent individuals. Fricker’s concept of epistemic injustice is useful for highlighting the ways in which AI recruitment and selection can work against social justice aims. The potential for epistemic injustice to occur when using AI systems is clear, but what are the implications of this for career guidance?

WHAT THIS MEANS FOR CAREER ACCESS, EDUCATION AND GUIDANCE

As detailed above, AI-based career access tools carry inherent ethical and legal risk (based on individuals rights to transparency, accountability, autonomy, fairness, non-discrimination, and privacy). These tools can also perpetuate epistemic injustice, working against the social justice potential of career guidance. The growing use of AI requires consideration of how to avoid reinscribing existing inequities in the emerging digitalised processes of career access, education, and guidance. As Hooley (2019) notes there are ‘career problems that are not easily solved through adaptability and individuals’ action. Building a meaningful response to such problems is likely to require collective and even political action and this is likely to make new demands on career guidance professionals’ (p. 186). The growing use of AI in selection and recruitment represents one such problem which requires political action and collective responses. The nascent nature of AI augmented recruitment and guidance represents not only an educative opportunity for career guidance professionals but also suggests an advocacy role. As legislation, policy and norms around the use of AI for recruitment is underdeveloped there is an opportunity for career guidance professionals and educators to provide input into the ethical guidelines and regulation of the use of AI in employment and in their practice. The ethical risks, built-in algorithmic bias and potential for epistemic injustice in AI systems represent career problems that require collective and political action.

MOVING BEYOND LEARNING HOW TO ‘PLEASE THE MACHINE’

Based on his findings, Albert recommends that candidates ‘research how to please the machine and the interviewers. Find out what the system looks for to increase your chances of getting hired (e.g. displaying appropriate body language in video screening software)’ (2019, p. 220). This response allows businesses using such tools to abrogate responsibility for the potential harms that could be caused and puts the burden of adjusting to AI-mediated career access on to individual candidates. This response relies on candidates’ ability to access knowledge about what systems are in place and what is needed to perform well in context of such systems. This solution reinscribes existing inequities. While candidates may be able to learn how to ‘please the machine’, career practitioners and recruiters also have a responsibility to provide an educative role – teaching people about these emerging practices in recruitment and selection.

To mitigate the ethical risks, companies developing the AI systems, the businesses employing them, and regulatory, legislative, and legal authorities have a role to play in minimising the potential harm that could be caused by the use of AI in career access. It is argued that AI systems should be ethical, and the ‘Build and Design’ of such systems should have ethics as a part of design within the software code (Nasim et al., 2022). Organisations should adopt best practices such as those used for the governance of algorithms in sectors such as healthcare and pharmaceuticals (Tursunbayeva et al., 2021). Self-regulations and self-audits should be part of

HRM practice, including regular analysis and monitoring of the use of their data (Sonderling et al., 2022). Key to mitigating biased algorithms are regulation, transparency and inclusive development cultures (Harvis-Nazzario, 2022).

GUIDELINES FOR THE DEVELOPMENT OF AI TOOLS IN CAREER ACCESS AND CAREER GUIDANCE

Many of guidelines developed in relation to the use of AI in connected and automated vehicles (European Commission, 2020) apply to the use of AI tools which exercise judgement, both in the recruitment and selection processes and in career coaching and support systems. Methods for the explainability of AI-based forms of decision making should be developed that are user-centred. The methods and vocabulary used to explain the role and functioning of AI systems should be transparent and cognitively accessible, the purposes and capabilities of AI should be openly communicated, and the outcomes traceable.

Individuals need to be adequately informed where AI systems are in use and be able to exercise their rights, such as the right to privacy, and to actively and independently, scrutinise, question, refrain from using, or negotiate AI modes of use and terms of service. Alternative routes for application and access should be available to candidates who have do not use social media for example, or do not want their data used and collected by AI tools. The obligations of the agents involved in the use of AI need to be identified. Given the size and complexity of the network of individuals and organisations in the creation, deployment, and use, it may become unclear who is responsible for ensuring that AI and its users comply with ethical and legal standards. Every individual and organisation should know who is required to do what and how. This can be done by creating a shared understanding of different actors' obligations toward the ethical design, deployment, and use of AI.

A new culture of responsibility should be fostered in relation to the use of AI in career access. This culture should include accountability – defined here as a form of responsibility arising from the obligation to explain something that has happened and one's role in that happening. A fair system of accountability requires that: (a) formal and informal mechanisms of accountability are created with respect to the use of AI; (b) different actors are aware of and able to discharge their duty to justify the operation of the system; (c) and the system of which AI are a part is not too complex, opaque, or unpredictable (European Commission, 2020).

CONCLUSION

As Thakkar et al. (2020) suggest the future of work is shaped by technical systems which are themselves embedded in power structures. This paper has attempted to highlight some of the ways in which AI-based systems can be complicit in the reproduction of existing patterns of inequity. In the emerging forms of career guidance systems and HRM selection tools there are ethical risks and the potential for the perpetuation of algorithmic bias and epistemic injustice. The nascent practices and emerging uses of AI in HRM and careers guidance explored here indicate that further empirical research is needed, especially in relation to the social justice implications. Are particular groups of people being disadvantaged by these technological developments? On the one hand, the use of AI tools in recruitment and selection offers businesses benefits including potentially diversifying the talent pool, cost and time savings, and relief from the mundane repetitive tasks. On the other hand, risks to equity, diversity and inclusion have been identified, as well as a number of other algorithmic-based and ethical risks. While suggestions have been made to mitigate the identified risks further research needs to be undertaken to determine whether the potential benefits of the use of AI are being delivered and the degree to which the risks are realised, and harms are occurring.

The social justice implications for careers education and guidance are multiple. Firstly, education and guidance should be given to individuals about negotiation of the AI tools that they are likely to encounter in the job application process. Secondly, the career guidance profession is being affected by the emergence of AI-based digital career coaching and support systems, which come with benefits and the potential for algorithmic risk. The impact of this provides another opportunity for research as practitioners adapt to this next stage of technological innovation. Thirdly, the development of AI tools for recruitment and selection and the ethical

and social justice implications of this, provide an advocacy opportunity for careers professionals. Legislation, policy and norms regarding the use of AI are still being developed. To mitigate the risks posed by biased algorithms regulation, transparency, and inclusive development cultures are crucial (Harvis-Nazzario, 2022). This presents an opportunity. Peak bodies and professional associations (e.g. IAEVG, 2024) can provide expert opinion to legislative and regulatory authorities on the impact of these processes on those affected, and can advocate for the ethical design, regulation, and the inclusion of principles such as transparency and accountability to ameliorate the harms that AI tools may have on career access.

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COMPETING INTERESTS

The author has no competing interests to declare.

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