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The Influence of AI Interview Explainability on Job Seekers' Perceived Fairness

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Abstract

Artificial intelligence (AI) has been applied to human resource selection and interviews. As a new recruitment and selection method, AI interview improves efficiency and flexibility, saves human resources and effectively avoids human subjective bias. However, various limitations of AI computing system cause individuals to have a lower sense of fairness towards AI decisions. In order to explore how to improve people's sense of fairness in AI interview, this paper introduces AI interview technology, analyzes the theory of job seekers' sense of fairness, and directly measures the Explainability of procedural interaction and decision basis perceived by job seekers in the interview process, so as to find out the factors that affect job seekers' sense of fairness in AI interview, and come up with strategic suggestions for improving the fairness of AI interview. It provides some enlightenment for organizations to make better use of AI for recruitment and selection.

Keywords: AI interview; Recruitment; A sense of fairness;Explainability

1. Introduction

1.1 Research Background

Enterprise recruitment refers to the process in which enterprises search for and attract those who have the ability and interest to work in the enterprise according to the requirements of human resources planning and job analysis, and select and hire suitable personnel from them. Artificial intelligence (AI) is an important driving force for the new round of scientific and technological revolution and industrial transformation. It is a new technological science that studies, develops, and applies theories, methods, technologies, and application systems for simulating, extending, and expanding human intelligence. AI is an important part of the intelligent discipline. It attempts to understand the essence of intelligence and produce a new intelligent machine that can respond in a way similar to human intelligence. AI is a very broad science, including robotics, speech recognition, image recognition, natural language processing, expert systems, machine learning, computer vision, etc.

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In the context of the rapid development of current technology, artificial intelligence (AI) has deeply penetrated into various fields, and the recruitment field is no exception. As an innovative form of the recruitment process, AI interviews have increasingly attracted the attention of enterprises. This interview method uses intelligent technologies such as speech recognition, natural language processing, and machine learning, with big data and algorithms as the core, to evaluate the abilities and adaptability of job seekers, thereby improving the efficiency of recruitment (Zhang Min, Zhao Yixuan, 2022; Zhao Yixuan et al., 2020; Li Yuhui et al., 2019; Cai Qiming et al., 2019; Xiao Xingzheng et al., 2018; Zhang Xinrui et al., 2015). However, the introduction of AI interviews has also brought many controversies and concerns, among which the most prominent issue is its impact on job seekers' sense of fairness. From the research background, the wide application of AI interviews stems from their high efficiency and convenience. Traditional interview methods require face-to-face communication between interviewers and job seekers, which is not only time-consuming and labor-intensive but also easily affected by subjective factors. In contrast, AI interviews can automatically score and analyze job seekers' answers through intelligent technology, which not only greatly improves the efficiency and objectivity of interviews but also avoids the subjectivity of interviewers (Logg et al., 2019). However, behind this high efficiency and convenience, there are also some potential problems. For example, whether the scoring criteria of AI interviews are fair, whether there is bias, and whether they can accurately evaluate the actual abilities of job seekers. These issues are directly related to the sense of fairness and interests of job seekers.

1.2 Research Objectives and Significance

Recruitment interviews have always been one of the most effective ways for enterprises to select talents. The rise of AI interviews has changed the traditional selection model, making recruitment more efficient and cost-effective, and realizing more accurate person-job matching to a greater extent (Sun Lanzhu et al., 2024). From the perspective of research significance, exploring the impact of AI interview explainability on job seekers' sense of fairness has important practical significance and theoretical value. This research can provide useful references and insights for the recruitment field. By in-depth analysis of the explainability of the AI interview process and results and its impact on job seekers' sense of fairness, enterprises can be helped to better utilize this technology and improve the efficiency and fairness of recruitment. With the continuous development of AI technology, its applications in various fields are becoming more and more widespread. How to ensure the fairness of AI technology has become the focus of social attention. Through this research, the understanding of AI ethics and fairness can be further deepened, providing useful guidance for the application and development of AI technology in human resources management.

In the era of rapid digital development, AI interviews, as an emerging recruitment method, have been increasingly widely used in enterprise talent selection due to their advantages such as high efficiency and objectivity. However, the unique nature of AI interviews has also triggered many discussions about fairness. Job seekers' perception of interview fairness not only affects their impression and attitude towards enterprises but also may have an important impact on

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recruitment results and talent retention. This paper deepens the understanding of AI interview explainability and its impact on job seekers' sense of fairness, which can help enterprises better utilize this technology and improve the efficiency and fairness of recruitment. Through this research, the understanding of AI recruitment and fairness can be further deepened, providing useful guidance for the application and development of AI technology in human resources management.

2. Literature Review and Hypothesis Development

2.1 Literature Review

2.1.1 AI Interview Concept and Sense of Fairness

With the continuous development of science and technology, artificial intelligence has been introduced into a large number of fields and applied to various management functions (Shin & Park, 2019; Diakopoulos & Koliska, 2017). AI interviews (interview processes supported by AI, including AI as an interviewer, automated analysis of interview data, etc.) have become a new choice for many enterprises to pursue efficiency and control costs.

From automatically screening resumes to providing data-driven decision support, AI interviews are a major innovation in the human resources management industry. They enable human resources practitioners to focus on more strategic work, realize scientific talent identification, selection, and utilization, support organizational strategic decision-making, and enhance the value of human resources management. In addition, with the help of AI interviews, candidates can break through the limitations of time and space and participate in interviews remotely. Interviewers can also directly understand the background of candidates through AI reports and quickly complete a round of screening. According to statistics from Yunnan Baiyao, after adopting AI interviews, the efficiency of talent screening has increased by nearly 60%.

Sense of fairness is an important concept in the fields of social psychology and organizational behavior. It is people's perception and evaluation of the fairness of treatment, opportunities, environment, etc. among society, organizations, and individuals. It is a subjective experience of fairness issues in people's hearts, including both cognitive evaluation of fairness and the resulting emotional experience. Some scholars have pointed out that in the recruitment process, procedural fairness and interaction fairness are especially important (Arvey & Renz, 1992). Procedural fairness includes ensuring that the assessment criteria for all applicants are consistent and free from discrimination; publicizing the selection process and criteria, giving all job seekers equal opportunities regardless of their identity characteristics, providing sufficient information and feedback, conducting a fair and comprehensive assessment of all applicants' materials, and finally making unbiased decisions based on objective criteria in the decision-making stage. Interaction fairness refers to the openness of the interaction between recruiters and job seekers in the recruitment and selection process, the appropriateness of questions and follow-up questions, and individuals' fair perception of dignity (Xue He, 2021). Some researchers compared the differences between AI interviews and human interviews from the perspective of decision-

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makers and found that AI interviews have higher objective consistency (Howard et al., 2020), but lower kindness and human touch (Kaibel et al., 2019). Other researchers found that job seekers have a more positive response to human scoring and joint scoring than to AI scoring methods (Gonzalez et al., 2022). In addition, some studies have shown that job seekers show higher enthusiasm and initiative in real-time interactive interviews (Suen et al., 2021).

2.1.2 Explainability

Explainable artificial intelligence (XAI) refers to the ability of an intelligent agent to communicate clearly and effectively with users, affected parties, decision-makers, developers, etc. of an AI system in an explainable, understandable, and human-computer interactive way to gain human trust and meet regulatory requirements. Generally speaking, explainability refers to the ability of a system to explain the decisions made by an AI algorithm to users. Explainability is applicable to the ability of a system to explain its reasoning and results (ABDOLLAHI B&NASRAOUI O, 2018). If an AI system can provide a human-understandable explanation for why it makes any specific prediction, then it is explainable. Explainability includes "post hoc" explanations. Considering that a system assigns costs or benefits to specific individuals, it requires a human-understandable explanation. In the context of AI interviews, explainability can be simply defined as the ability of AI to provide reasonable and convincing explanations for interview results and processes. Andrew Feenberg once pointed out that the "black box" of technical tools can be opened, that is, artificial intelligence technology is constructible and explainable. However, some scholars, such as critical constructivism, believe that unconscious biases may be reflected in the seemingly reasonable design of algorithms.

2.2 Hypothesis

2.2.1 The Impact of AI Interview Procedural Interaction Explainability on Job Seekers' Sense of Fairness

The influence of interactive Explainability of AI interview procedures on job seekers' perceived fairness In the recruitment process, AI technology has revolutionized traditional recruitment methods through automation and intelligent tools. Its technology can efficiently sift through massive applicant data and automatically screen potential candidates, which can improve the efficiency of recruitment and the quality of decision-making to some extent. However, in the context of AI interview, the AI algorithm system will neither present enough information nor explain, and the consistent mechanical sound and picture will cause the insecurity and uncertainty of job seekers (Acikgoz et al.,2020; Langer et al.,2018). However, when the logic of interaction between AI and job seekers can be explained and job seekers can identify with the interaction process, uncertainty and fear caused by information asymmetry can be effectively reduced (Fan Bo, Li Jingjing, 2024). Therefore, in the AI interview process, the system can clearly explain the principle and logic of the interaction to the job seeker, and when the job seeker can understand the procedural interaction of the AI interview, they will feel that they have been respected and treated fairly in the interview process. Based on this,

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H1: Explainability of procedural interaction positively affects job seekers' sense of fairness.

2.2.2 The Impact of AI Interview Decision Rule Explainability on Job Seekers' Sense of Fairness

Decision rule explainability refers to the ability of an AI interview system to clearly explain to job seekers how to make hiring decisions based on interview performance. Traditional interviews rely on interviewers' judgment combined with talent assessment methods and experience, which is not only inefficient but also easily affected by human factors, leading to doubts about the accuracy and timeliness of interview results. The algorithm model of AI interviews also faces similar challenges. AI interviews mainly rely on quantitative indicators presented according to rules for decision-making. In such socialized tasks, qualitative information that is difficult to quantify but important and shown by job seekers may be ignored by AI algorithms. Therefore, even if AI can explain the basis for its judgment, some job seekers may still doubt whether it can understand their "implied meaning", resulting in their uniqueness being ignored (Longoni et al., 2019; Sloan&Waener, 2018).

In addition, even algorithms developed in strict accordance with procedures may have biases (Hunkenschroer&Luetge, 2022; Newman et al., 2020). AI algorithms rely on historical data, which may contain some common social biases, such as gender, age, marital status, etc. Employees believe that algorithmic decision-making has limitations in using and analyzing qualitative information compared with human decision-making and is easy to ignore individual uniqueness (Longoni et al., 2019). Moreover, algorithm developers may also have their own subjective biases when setting algorithms, resulting in biased algorithm decision-making results and unfairness in AI interview decisions. Therefore, when job seekers doubt or do not agree the explanations given by AI, they will have a lower sense of fairness in AI interviews. In practice, the decision rules of AI interviews are often complex and involve a large amount of data and algorithms. When explaining these complex decision rules in detail to job seekers, it may make them feel confused and uneasy.

Based on the above analysis, the following hypothesis is proposed:
H2: Decision rule explainability negatively affects job seekers' sense of fairness.

2.2.3 The Interaction between Procedural Interaction Transparency and Decision Rule Explainability

Previous studies have found that result information and process information jointly affect individuals' fairness judgment (Cropanzano&Folgerde, 1989). At the same time, according to the fairness heuristic theory (Fairness Heuristic Theory; Lind, 2001): once the overall sense of fairness is formed, people will use the overall sense of fairness as heuristic information to guide and explain subsequent related fairness information. That is, once an overall fairness judgment is made, this judgment itself will also affect other fairness. For example, if job seekers think that the procedural interaction is fair and then generate an overall sense of fairness, they will think that the results of the AI interview are also fair or the decision basis of the interview is also fair.

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When individuals are in an uncertain situation, they tend to use fairness heuristics to make judgments.

Procedural interaction explainability mainly focuses on the interaction part in the interview process, while decision rule explainability focuses on the decision basis of the interview results. When the procedural interaction explainability is high, job seekers have a better understanding of the interview process and feel more secure and in control psychologically. In this case, moderate decision rule explainability may not have a negative impact on the sense of fairness, and may even further enhance the sense of fairness due to the improvement of overall transparency. On the contrary, job seekers already think that the AI algorithm system is an opaque black box (Pasquale, 2015). When procedural interactions are less interpretable, job seekers are confused and uncertain about the interview process itself. At this point, too much explanation of the decision rules may exacerbate their confusion and make it more difficult for them to understand the entire interview process, further reducing the sense of fairness. Combined with hypothesis 1 and hypothesis 2 above, when job seekers do not feel fair in the interaction process of AI interview, that is, they are not sure how AI conducts the interview, nor are they clear about the communication and interaction mode of AI, etc., which not only increases job seekers' uncertainty about AI program, but also makes the digital distance between job seekers and AI become larger. In such a scenario, even if the AI interview algorithm is explainable, it is difficult for the recruitment task that requires more human skills, and it is unable to conduct a comprehensive and comprehensive assessment of the job seekers like the human interviewer, which leads the job seekers to question the competence of the AI interview and thus produce a lower sense of fairness. When the interactive process of AI interview shows a significant "reasonable", it can shorten the distance between the AI program and the job seeker, effectively alleviate the sense of unease of the job seeker, and thus improve the subjective initiative of the job seeker. In this situation, job seekers will focus on the interview process, reduce their attention to the explainability of the hidden AI decision-making algorithm, and actively express their uniqueness and self-ability in the process of interacting with AI, thus having a positive impact on the interview results, that is, the explainability of the AI interview interaction directly leads job seekers to make more positive and fair judgments on the AI interview. In summary, the following hypotheses are proposed:

H3: Explainability of procedural interaction and Explainability of decision rules have an interaction effect on job seekers' perceived justice.

3. Experiment: The influence of AI interview on the fairness of job seekers

3.1 Participant (Subject)

In this paper, questionnaires are distributed to specific groups, namely those who have participated in AI interviews. Considering that it is difficult to cooperate with enterprises that use AI for interview, and it is easy to arouse the vigilance of job seekers when questionnaires are issued by enterprises, this paper conducts an online survey with the help of Weibo platform. A

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total of 165 valid questionnaires were collected. Among the participants, the proportion of females was slightly higher than that of males (52.12% vs 47.88%), and the age groups were more balanced, mainly 3645 years old and 46-55 years old, accounting for 24.85% and 24.24% respectively. Tertiary and high school and below had a higher proportion of participants, 30.91% and 27.27% respectively. All participants participated in the survey voluntarily.

3.2 Variable Measurement

In this study, the questionnaire is divided into two parts. The first part is the basic information of the interviewees, such as age and gender, and the second part measures the interviewees' perception of interactive fairness, procedural fairness and overall fairness in the AI interview. The variables and measurement methods involved in this study are as follows:

Explainability scale of program interaction: Referring to relevant literature and combined with the actual situation, a scale containing 5 items was designed to measure job seekers' perception of Explainability of program interaction in AI interviews. For example, "In the AI interview, I know the purpose of each question" and "the AI interviewer can clearly explain the relevance of the question to the position." A Likert 5-point scale was adopted, with 1 indicating "complete disagreement" and 5 indicating "complete agreement".

Decision rule Explainability scale: Also combined with literature review and actual situation, a four-item scale was constructed to measure job seekers' feelings on the Explainability of decision rules. For example, "I understand how the AI interview makes hiring decisions based on my performance" and "the AI interview system's explanation of decision rules is clear and easy to understand". The scoring method was consistent with the procedural interactive Explainability scale.

Fairness scale: A mature fairness scale was selected, including two dimensions of distributive justice and procedural justice, with a total of 5 items. The representative items were "I think the results of the AI interview fairly reflect my abilities" (distributive fairness) and "I feel that the AI interview process gave me the opportunity to fully present myself" (procedural fairness). Likert 5-level scoring method was adopted.
Control variables: Basic information of participants was collected as control variables, including age, gender, education, work experience, etc.

3.3 Statistical Analysis

SPSS 26.0 was used for data analysis in this study. First of all, descriptive statistical analysis is carried out to understand the basic characteristics of the sample and the mean value and standard difference of each variable. The Explainability of procedural interaction and decision basis were tested by correlation analysis to explain the pairwise correlation between sexiness and overall perceived fairness. Regression analysis was used to verify the influence of AI interview on the Explainability of procedural interaction and the Explainability of decision basis, and a regression

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model including the Explainability of procedural interaction, the Explainability of decision basis and their interaction terms was constructed to test the influence on the overall perception of justice, and the moderating effect analysis method was used to test hypothesis 3.

3.4 Research Results

3.4.1 Reliability Analysis

reliability analysis represents a kind of reliability. Reliability refers to the consistency, stability and reliability of test results, and is generally expressed by internal consistency. The higher the reliability coefficient, the more consistent, stable and reliable the test results. Systematic errors have little impact on reliability because they always affect measurements in the same way and therefore do not create inconsistencies. If the α coefficient value is between 0 and 1, the greater the coefficient value, the higher the reliability. If the alpha coefficient value is above 0.8, the reliability of the test or scale is good. If the reliability coefficient is greater than 0.7, it is acceptable. If it is greater than 0.6, it should be corrected without losing the original value; If it is below 0.6, the ruler needs to be redesigned.

Table 1. Reliability analysis

Reliability analysis		
Cronbach's alpha	Cronbach's alpha based on standardized terms	Number of Terms
0.874	0.874	15

A total of 15 items of Likert scale data were tested for reliability, and α=0.874>0.8 was obtained from our analysis, indicating that the internal consistency of the scale was acceptable, and thus the reliability of the questionnaire was high.

3.4.2 Analysis of Validity

Validity refers to the degree to which the measurement tool or means can accurately measure the things to be measured. Validity refers to the degree to which the measured result reflects the content to be investigated. The more consistent the measured result is with the content to be investigated, the higher the validity is. Otherwise, the validity is lower. In the validity analysis of this questionnaire, we adopted the significance test of KMO value test and Bartlett sphere test. KMO value test is used to check the correlation between variables and the correlation between slices. When the value of KMO is above 0.9, factor analysis is very suitable. If the KMO value is between 0.8 and 0.9, it is suitable. Between 0.7 and 0.8 indicates appropriate; A range between 0.6 and 0.7 is barely appropriate; If it is less than 0.5, it is not suitable and is not suitable for factor analysis. The significance test of Bartlett's spherical test is another tool to verify whether factor analysis can be performed. If the result of the significance test of Bartlett's spherical test is significant, it means that factor analysis can be performed

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Table 2 Questionnaire validity analysis

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy		.887
Bartlett's Test of Sphericity	Approximate Chi-squared value	1133.443
	Degree of Freedom	105
	Statistical Significance	.000

The main purpose of this study is to examine the impact of AI interviews on job seekers' perception of fairness. As shown in the table, the KMO value is 0.887, the measurement observation value of Bartlett spherical detection value is 1133.443, and the significance probability $p=0.000<0.05$. The null hypothesis should be rejected to prove the correlation between variables, which is more suitable for factor analysis, indicating that the questionnaire has structural validity and can be used for factor analysis.

3.4.3 Questionnaire sample descriptive statistics

Descriptive statistical analysis is used to validate the collected data, including percentage and frequency. This paper describes the overall situation of the sample through the gender, age, educational background, years of employment and AI interview results of the interviewees.

In this questionnaire survey, the proportion of women is slightly higher than that of men, and the age level is more balanced, mainly 36-45 years old and 46-55 years old, accounting for 24.85% and 24.24% respectively. The higher proportion of participants in junior college and high school and below, 30.91% and 27.27% respectively, shows the lower educational level of the group mainly involved in AI interviews. In terms of working years, most of the participants' working years are concentrated in 3-7 years (35.15%) and 7 years or more (29.7%), which reflects that the participants have a certain degree of workplace experience, and also indicates that relatively more experienced job seekers are more accepting of AI interviews.
The details are shown in the following table.

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Table 3 Questionnaire sample descriptive statistics

Descriptive Statistics			
Item	Options	Frequency	Percentage
Gender	Male	79	47.88%
	Female	86	52.12%
Age	Under 25	24	14.55%
	26—30	34	20.61%
	31—40	41	24.85%
	41—50	40	24.24%
	Over 50	26	15.76%
Education	High school and below	45	27.27%
	junior college	51	30.91%
	undergraduates	42	25.45%
	Master degree or above	27	16.36%
work experience	Just graduated	44	26.67%
	1—3 years	14	8.48%
	3—7 years	58	35.15%
	Over 7 years	49	29.7%
The results of the AI interview	Pass	112	67.88%
	Not pass	53	32.12%

In addition, in this survey, from the results of the AI interview, we found that 67.88% passed the AI interview, more than half.

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Table 4.A statistical description of perceived fairness

descriptive statistics					
	N	minimum	maximum	mean value	Standard deviation
I think the results of the AI interview accurately reflect my performance in the interview.	165	1	5	4.20	.964
I would like to participate in the AI interview again	165	1	5	3.91	1.058
Throughout the AI interview process, I was treated fairly and equally without any discrimination or prejudice.	165	1	5	3.98	1.068
I think the result of the AI interview is a fair reflection of my abilities	165	1	5	4.12	.974
I think the AI interview process gave me the opportunity to fully show myself	165	1	5	4.05	1.037
sense of fairness	165	1.20	5.00	4.0618	.76561
Number of valid cases (column)	165				

In this questionnaire survey, the score of fairness in the last part of the scale is generally relatively high, indicating that job seekers have a high acceptance of AI interview.

3.4.4 Correlation analysis

The five variables used to measure job seekers' perceived fairness in the result were calculated and combined into one variable to measure job seekers' perceived fairness in the AI interview, and the correlation analysis was carried out between the five indicators used to measure the Explainability of the interaction of AI interview procedures and the perceived fairness.

The specific correlation analysis results are shown in the following table.

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Table 5 Analysis of the correlation between Explainability of procedural interaction and perceive justice

Correlation							
		In an AI interview, I can clearly understand the intention behind each question.	The AI interviewer will clearly explain the specific connection between the question and the job requirements.	As for the leading questions raised in the AI interview process, I understand its guiding direction and purpose.	I feel that the AI system can accurately reflect my abilities and potential	As for the leading questions raised in the AI interview process, I understand its guiding direction and purpose.	sense of fairness
In an AI interview, I can clearly understand the intention behind each question.	Pearson correlation coefficient	1	.580**	.573**	.552**	.591**	.357**
	Sig. (two-tailed)		.000	.000	.000	.000	.000
	N	165	165	165	165	165	165
The AI interviewer will clearly explain the specific connection between the question and the job requirements.	Pearson correlation coefficient	.580**	1	.573**	.522**	.589**	.320**
	Sig. (two-tailed)	.000		.000	.000	.000	.000
	N	165	165	165	165	165	165
As for the leading questions raised in the AI interview	Pearson correlation coefficient	.573**	.573**	1	.538**	.657**	.312**

process, I understand its guiding direction and purpose.	Sig. (two-tailed)	.000	.000		.000	.000	.000
	N	165	165	165	165	165	165
I feel that the AI system can accurately reflect my abilities and potential	Pearson correlation coefficient	.552**	.522**	.538**	1	.556**	.280**
	Sig. (two-tailed)	.000	.000	.000		.000	.000
	N	165	165	165	165	165	165
As for the leading questions raised in the AI interview process, I understand its guiding direction and purpose.	Pearson correlation coefficient	.591**	.589**	.657**	.556**	1	.332sense of fairness**
	Sig. (two-tailed)	.000	.000	.000	.000		.000
	N	165	165	165	165	165	165
	Pearson correlation coefficient	.357**	.320**	.312**	.280**	.332**	1
	Sig. (two-tailed)	.000	.000	.000	.000	.000	
	N	165	165	165	165	165	165
**.At level 0.01 (two-tailed), the correlation was significant.							

According to the above table, it is concluded that the significance between the variables is less than 0.05, and the correlation is significant. The Explainability of procedural interaction was significantly positively correlated with perceived justice, which initially supported hypothesis 1.

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This paper analyzes the correlation between fairness perception and five indexes controlling the Explainability of decision of AI interview algorithm.

The specific correlation analysis results are shown in the following table.

Table 6 Analysis of the correlation between explainability of decision basis and perceived justice

Correlation							
		Sense of fairness	I knew exactly what specific metrics the AI interview was using to evaluate my performance.	The eighting of the AI interview system to each evaluation indicator allows me to understand its impact on the outcome.	I know exactly how my performance in the interview translates into my final grade.	After the AI interview, the explanation of the decision rules was enough for me to understand the basis of the hiring decision.	I think the decision rules used in AI interviews are simple to understand and reasonable.
Sense of fairness	Pearson correlation coefficient	1	-.449	-.523**	-.226**	-.098	-.152
	Sig. (two-tailed)		.056	.004	.003	.210	.031
	N	165	165	165	165	165	165
I knew exactly what specific metrics the AI interview was using to evaluate my performance.	Pearson correlation coefficient	-.449	1	.570**	.523**	.544**	.582**
	Sig. (two-tailed)	.056		.000	.000	.000	.000
	N	165	165	165	165	165	165

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The weighting of the AI interview system to each evaluation indicator allows me to understand its impact on the outcome	Pearson correlation coefficient	-.523**	.570**	1	.607**	.561**	.619**
	Sig. (two-tailed)	.004	.000		.000	.000	.000
	N	165	165	165	165	165	165
I know exactly how my performance in the interview translates into my final grade.	Pearson correlation coefficient	-.226**	.523**	.607**	1	.560**	.593**
	Sig. (two-tailed)	.003	.000	.000		.000	.000
	N	165	165	165	165	165	165
After the AI interview, the explanation of the decision rules was enough for me to understand the basis of the hiring decision.	Pearson correlation coefficient	-.098	.544**	.561**	.560**	1	.580**
	Sig. (two-tailed)	.210	.000	.000	.000		.000
	N	165	165	165	165	165	165
I think the decision rules used in AI interviews are simple to understand and reasonable.	Pearson correlation coefficient	-.152	.582**	.619**	.593**	.580**	1
	Sig. (two-tailed)	.031	.000	.000	.000	.000	
	N	165	165	165	165	165	165
**.At level 0.01 (two-tailed), the correlation was significant.							

According to the above table, it is concluded that the significance between the variables is less than 0.05, and the correlation is significant. The Explainability of decision rules is negatively correlated with the perceived justice, which initially supports hypothesis 2.

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Table 7 Hierarchical regression analysis of Explainability of procedures and decisions

coefficient[a]						
model		Unnormalized Coefficient		Standardization Coefficient	t	Significance
		B	Standard Error	Beta		
1	(Constant)	2.695	.297		9.059	.000
	Explainability of Program Interaction	.317	.067	.371	4.694	.000
	Explainability of Decision Basis	-.055	.075	-.058	.732	.035
2	(Constant)	2.612	.402		6.491	.000
	Explainability of Program Interaction	.304	.069	.356	4.386	.000
	Explainability of Decision Basis	-.066	.077	-.069	.855	.394
	1、1.Gender?	.054	.118	.033	.456	.649
	2、2.Age?	.073	.071	.117	1.025	.307
	3、3.Education?	.027	.056	.035	.478	.633
	4 、 4.Work Experience?	-.104	.079	-.151	-1.315	.190
a. Dependent Variable：Sense of Fairness						

Multiple linear regression analysis was conducted with perceived justice as the dependent variable, Explainability of procedural interaction and Explainability of decision rules as independent variables, and age, gender, education background and work experience as variables. The results show that Explainability of procedural interaction has a significant positive predictive effect on perceived justice, which further supports hypothesis 1. The Explainability of decision rules has a significant negative predictive effect on perceived fairness, which further supports hypothesis 2.

The calculation of five variables that measure the procedural fairness of job seekers is combined into one variable and renamed as procedural fairness. Similarly, the calculation of five variables that measure the interactive fairness of job seekers is combined into one variable and renamed as interactive fairness. This paper analyzes its interaction with job seekers' sense of fairness.
The specific correlation analysis results are shown in the following table.

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Table 8 The intersubjective effect test of Explainability of program interaction and Explainability of decision basis

Test of Intersubjective Effects					
Dependent Variable：Sense of Fairness					
Source	Type III Sums of Squares	Degree of freedom	Mean Square	F	Significance
Modified Model	86.961[a]	113	.770	2.052	.002
Intercept	1244.305	1	1244.305	3317.281	.000
Explainability of Program Interaction	32.654	19	1.719	4.582	.000
Explainability of Decision Basis	10.896	17	.641	1.709	.072
Explainability of Program Interaction * Explainability of Decision Basis	34.069	77	.442	1.180	.267
Error	19.130	51	.375		
Total	2816.960	165			
Revised Total	106.091	164			
a. R^2 = .820（after the adjustment R^2 = .420）					

The sum of squares of the modified model is 86.961, the degree of freedom is 113, the mean square is 7.70, the F-value is 2.052, and the significance is 0.02. This shows that the modified model is significant overall, that is, the factors included have an effect on the dependent variables.

The mean square of Explainability of program interaction is 1.719, F-value is 4.582, and significance is 0.000, indicating that the Explainability of program interaction has a very significant impact on the dependent variable. The sum of squares of Explainability of the decision basis is 10.896, the degree of freedom is 17, the mean square is 6.41, the F-value is 1.709, and the significance is 0.072, which indicates that the influence of this item on the dependent variable is relatively weak. The F-value of Explainability of program interaction * Decision basis Explainability is 1.180 and significance is 0.267, indicating that the interaction of program interaction Explainability and decision basis Explainability has no significant effect on the dependent variable.

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Taking the fairness perception of job seekers as independent variables and the Explainability of procedural interaction and decision basis of AI interview as independent variables, multiple linear regression method is used to explore the interdependence between perceived justice and the Explainability of AI interview interaction procedure and decision basis.

The specific results are shown in the following table.

Table 9 Multiple linear regression analysis of process, decision Explainability and fairness

ANOVA[a]						
Model		Quadratic Sum	Degree of Freedom	Mean Square	F	Significance
1	Regression	14.137	1	14.137	28.105	.000[b]
	Residual	81.992	163	.503		
	Total	96.129	164			
2	Regression	14.585	2	7.292	14.488	.000[c]
	Residual	81.544	162	.503		
	Total	96.129	164			
a. Dependent Variable：Sense of Fairness						
b. Predictive Variables: (Constant), Explainability of Program Interactions						
c. Predictive Variables: (Constant), Explainability of Program Interactions, Explainability of Decision Basis						

The regression sum of squares is 14.137, which represents the variance explained by the independent variable (Explainability of program interactions). A degree of freedom of 1 means that only one independent variable is at play (i.e., Explainability of program interactions). The F-value of 28.105 was used to test the overall significance of the regression model. The significance of 0.000 is much smaller than the common significance level (such as 0.05), indicating that the regression model is significant, that is, the independent variable (Explainability of procedural interaction) has a significant impact on the dependent variable (perceived fairness).

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Table 10 Linear regression analysis of process, decision Explainability and fairness

coefficient[a]								
model		Unnormalized coefficient		Standardization coefficient	t	significance	Collinearity statistics	
		B	standard error	Beta			tolerance	VIF
1	(constant)	2.934	.220		13.351	.000		
	Explainability of program interaction	.311	.059	.383	5.301	.000	1.000	1.000
2	(constant)	2.764	.284		9.724	.000		
	Explainability of program interaction	.287	.064	.353	4.456	.000	.834	1.199
	Explainability of decision basis	.068	.072	.075	.943	.347	.834	1.199
a. dependent variable : sense of fairness								

The regression sum of squares is 14.585, indicating that the variance explained by the two independent variables (Explainability of program interaction and Explainability of decision basis) has increased somewhat. The degree of freedom is 2 because there are two independent variables at play (order interaction Explainability and decision basis Explainability). The F-value is 14.488, which is also used to test the overall significance of the model. The significance is 0.000, indicating that the regression model containing the two independent variables of order interaction Explainability and decision basis Explainability is also significant, that is, the two independent variables have a significant comprehensive impact on the dependent variable (perceived fairness). Overall, the influence of the independent variable (Explainability of procedural interactions alone, and the combination of decision basis Explainability and procedural interaction Explainability) on the dependent variable (perceived fairness) is significant in both models.

In summary, hypothesis 3 is verified.

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4. Conclusion

4.1 The general situation of job seekers' sense of fairness

According to the results of the questionnaire survey, it is found that the job seekers who have participated in the AI interview generally have a high level of fairness, and the average score of each index controlling their sense of fairness is more than 3 points (out of 5 points). This shows that most job seekers who have participated in AI interviews trust this new type of selection method, believing that it can fairly assess the ability of each candidate and treat each job seeker equally. However, there are still a small number of respondents who strongly disagree with AI interview, believing that it cannot treat job seekers fairly. At present, AI interview cannot completely replace human interview, and the development of AI interview needs to be continuously improved and perfected to improve the trust of job seekers in an all-round way.

4.2 Factors that affect job seekers' sense of fairness in AI interview

4.2.1 The role of interactive Explainability of AI interview procedures

Compared to traditional interviews, AI interviews have obvious differences in interaction. Candidates are faced with preset procedures and algorithms, not emotional and subjective interviewers. This change allows job seekers to focus more on answering the questions and avoid the biases that interviewers may have based on personal preferences or stereotypes. In an AI interview, when procedural interactions are interpretable, candidates can clearly understand the intent of each question and the design purpose of the interaction. This makes job seekers no longer feel confused and passive in the interview process, but can take the initiative to show their abilities and advantages according to the requirements of the question, thus enhancing their sense of control and participation in the interview. Moreover, the Explainability of procedural interaction shows job seekers the transparency and rationality of the interview process, making it easier for job seekers to believe in the fairness and science of the AI interview system. When job seekers can understand the procedural interaction of an interview, they will see it as an evaluation process based on objective criteria and sound logic, rather than arbitrary or subjective judgments. Therefore, the interactive Explainability of AI interview procedures can positively affect job seekers' sense of fairness.

4.2.2 The role of Explainability of AI interview decision basis

Unlike traditional interviews, AI interviews are usually based on fixed algorithms and rules, lacking the flexibility and subjective judgment that human interviewers have in the interview process. When this relatively rigid basis for decision making is explained to job seekers, it can lead them to feel that the interview process lacks humanity and fails to fully take into account individual differences and special circumstances. The decision-making basis of AI interviews is usually based on complex algorithmic models and large amounts of data processing, which may involve knowledge in specialized fields such as machine learning and natural language processing. Even if the decision basis is explained to the job seeker, it is often difficult for the job seeker to truly understand because of its professionalism and complexity. Job seekers often

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have subjective perceptions and expectations about their performance in the interview, and the decision-making basis for AI interviews is based on objective data and algorithms. Even if the decision basis is explained in detail, there may still be a big difference between the subjective feeling and the objective explanation of the job seekers, which is easy to lead to their doubts about fairness. Therefore, the Explainability of AI interview decision basis negatively affects job seekers' sense of fairness.

4.2.3 Interaction between AI interview procedure and interaction

When the Explainability of procedural interaction in AI interview and the Explainability of decision basis are compared together, it is found that the Explainability of procedural interaction in AI interview has a more significant effect on the overall perception of fairness of job seekers. In other words, when users interact with AI interview, job seekers can feel equal. Reducing digital distance is more important than hiding deep AI program algorithmic Explainability. That is, the Explainability of the interaction of AI interview procedures directly causes job seekers to make more positive and fair judgments about AI interviews.

5. Inspiration and suggestions

Based on the company's stance to save interview costs and the ongoing development of artificial intelligence, the scope of use of AI will continue to increase. However, AI application and human resource management practice are still in their infancy, and individuals' perception of their fairness is still controversial. In order to enhance job seekers' acceptance of AI interviews, enhancing their sense of fairness to AI interviews can start from the following suggestions.

5.1 Optimize the Explainability of program interaction

During the AI interview design phase, HR should ensure that each question has a clear intent and is clearly communicated to candidates when asked. For example, before asking a question, add a brief statement such as, "This next question will test your ability to cope with stress, because we often encounter emergency situations in our daily work..." It allows candidates to answer questions in a targeted way and gives them more control over the interview process. Before the interview, the applicant is introduced to the overall process of AI interview in detail, including how many links, the general content and time arrangement of each link. A simple guide can be provided before the interview begins, or prompts can be provided during the interview to help candidates better understand the progress of the interview and reduce uncertainty and anxiety. The HR department should give clear feedback in time after the interview. The feedback should not only point out the strengths and weaknesses of the response, but also explain how it can be improved. This allows candidates to be clear about their performance and to feel more involved in the interview process.

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5.2 Reasonably grasp the Explainability of decision rules

Enterprises should refine and simplify the complex decision-making rules of AI interviews and explain them to job seekers in plain language. Avoid overly technical, obscure terminology and complex algorithmic descriptions, and instead present key evaluation metrics and decision points in an intuitive, understandable way. Make it easy for job seekers to understand the general logic of the decision rules and enhance their trust in the fairness of the interview. The interpretation of decision rules is not static, and enterprises should dynamically adjust and optimize the content and method of interpretation according to the actual situation of AI interviews and the feedback of job seekers. Candidates should also be clearly informed about the factors that play a key role in the final decision, and how these factors measure and influence the outcome. Allow candidates to correlate their performance in the interview with these key decision factors to better understand the basis for the final decision. If you find that a certain explanation is confusing to most job seekers, modify and improve it in time; If the decision rules themselves have been adjusted or optimized, update the interpretation accordingly to ensure that job seekers accurately understand the latest decision basis.

5.3 To play a managerial role in organizations and enterprises

For enterprises and organizations, whether to introduce AI interviews and how to adopt this new technology are very important decisions. At the same time, the result of the interview is also the most important aspect of job seekers. The recruiter can inform the job seeker in advance of the basic process of AI interview, remind the job seeker to avoid being affected by the external environment, the terminal environment and other precautions, in order to reduce the inner sense of insecurity of the job seeker and mobilize the positive emotion of the job seeker.

As an important part of the human resources development of an organization, recruitment should pay attention to the evaluation criteria and rationality of the interview. Organizations using AI interview should fully consider the reliability and validity of AI interview questions, taking into account the efficiency and results of the interview. For some positions with high interpersonal interaction and high work complexity that are difficult to quantify competency indicators, whether AI needs to be introduced to conduct interviews is also a problem that needs careful consideration by the organization. AI interview is not to replace the existence of traditional interview, but an auxiliary tool to help organizations efficiently and high-quality recruitment tools, the specific introduction of AI, how to use is the need for organizations and enterprises to decide according to the actual situation.

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References

Fan B, Li J J. How Does Algorithmic Transparency Enhance the Public's Trust in Government?[J]. Public Administration Review, 2024, 17(1): 4-24+196.

Xu P, Xu X Y. The Logic and Analytical Framework of Enterprise Management Reform in the Era of Artificial Intelligence[J]. Management World, 2020, 36(1): 122-129+238.

Jiang L Y, Cao L M, Qin X, et al. The Perception of Fairness in AI Decision-Making[J]. Advances in Psychological Science, 2022, 30(5).

Liu X X, Lu C Y, Xue H. Job Seekers' Acceptance of AI Interviews and Its Influencing Factors: A Qualitative Study from the Perspective of Fairness[J]. Human Resources Development of China, 2023, 40(3): 117-130.

Gao J, Qiao Y. Unveiling the Mystery? The Impact of AI Interview Transparency on Job Seekers' Sense of Fairness[J]. Human Resources Development of China, 2024, 41(11): 97-112.

Pei J L, Liu S S, Zhong C Y, Chen Y F. Can AI Algorithmic Decision-Making Improve Employees' Perception of Procedural Fairness?[J]. Foreign Economics & Management, 2021, 43(11): 41-55.

Li Y H, Tang Z Y, Jin P T, et al. Elimination or Advancement? The Breakthrough Path of Traditional Talent Evaluation Technology in the Context of Big Data[J]. Human Resources Development of China, 2019, 36(8): 6-17.

Gao J, Feng J W. The Double-Edged Sword Effect of Algorithmic Decision-Making on Employees' Sense of Fairness under Adverse Outcomes: A Perspective Based on Attribution Theory[J]. Human Resources Development of China, 2024, 41(5): 36-53.

Acikgoz, Y., Davison, K. H., Compagnone, M., & Laske, M. (2020). Justice perceptions of artificial intelligence in selection. International Journal of Selection and Assessment, 28(4):39

Kaibel, C., Koch-Bayram, I., Biemann, T., & Mühlenbock, M.(2019 July). Applicant perceptions of hiring algorithmsuniqueness and discrimination experiences as moderators. Paper Presented at Academy of Management Proceedings, New York, the United States.

Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance to medical artificial intelligence. Journal of Consumer Research, 46(4), 629–650.

Lind, E. A. How Does Fairness Heuristic Theory Influence Justice Judgments in Organizational Relations?[A]. In Greenberg J, Cropanzano R (Eds.). Advances in organizational justice[C]. Stanford, CA: Stanford University Press, 2001，1：56 - 88.

Pasquale, F. What Secrets Lie within the Black Box Society: The Algorithms Governing Money and Information?[M]. Boston: Harvard University Press, 2015.