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Acknowledgment

This master thesis marks the end of our time here at BI Norwegian Business School and the Master of Science program in Leadership and Organizational Psychology. During these two years, we have had an enormous learning curve with both challenges and achievements. The idea behind our master thesis is developed in collaboration with our supervisor, Elizabeth Solberg and Sven Kinden Iversen from HR Norge. As our area of research is somewhat new and underdeveloped, we hope our research can shed some light on new areas of further research.

We want to utilize this opportunity to thank Sven Kinden Iversen for his help at the beginning off our thesis project with some good ideas about approaches and formulations. Also, we would like to thank Mathias Hansson for helping us with several analytical and SPSS questions, his contribution has been highly appreciated. Furthermore, we would like to express our sincerest gratitude to our supervisor, Elizabeth Solberg. She has guided and supervised this thesis project for a long time and have always contributed with great enthusiasm and constructive feedback. She has been an immense motivation and has provided us with the possibility to learn from her knowledge, especially in the use of SPSS.

Kind regards,

Espen Wold & Helle Sandberg

Abstract

Artificial intelligence (AI) is more present in today's society than ever before, and the benefits from utilizing its many qualities in a recruitment setting have become a central topic for discussion among researchers over the last couple of years. The purpose of this study was to explore how the use of AI in recruitment may impact candidate's perception of fairness and likelihood to recommend the company to a friend or reapply sometime in the future if given the opportunity. This purpose led to our research question; "To what extent; (1) Does reconsideration opportunity as a feature of an AI-assisted recruitment process facilitates a better candidate experience? (2) Does exposure to this feature result in a greater experience of reconsideration opportunity, and – in turn, greater intention to recommend a friend to apply or to reapply in the future? Moreover, (3) does psychological entitlement moderate how candidates perceive and react to AI-assisted recruitment and selection decisions, or is it an outcome of a procedurally unjust process?".

To answer our research question, we conducted several experiments with a between-subject design, all in classrooms, where we used an online questionnaire to collect the data. We manipulated the experiment by separating the respondents randomly into two conditions, one who got the opportunity to get an HR manager review their results (i.e., reconsideration opportunity), and one group who did not. We found that candidates who received the reconsideration opportunity experienced the recruitment process to be fairer than the ones who did not. Our findings also suggest that there is a significant positive relationship between experienced reconsideration opportunity and interest of reapplying in the future. However, Psychological entitlement was not found to affect the perception of fairness in a AI-assisted recruitment process, suggesting that even if you feel entitled to a position you would not percieve the recruitment process to be less fair. Our research shows how a positive sense of procedural fairness is linked to a higher chance that candidates would reapply in the future, and experienced reconsideration opportunity is found to greatly mediate this relationship.

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1.0 Introduction

Recruitment, referring to the process of finding and hiring the best-qualified candidate for the job, is one of the most challenging parts of managing a business, and is crucial for business success (Artisan, 2017). As the competition to attract and select the best talent increases, organizations try to find new and more innovative ways to recruit these talents. This has created the room for artificial intelligence (AI) to enter the marketplace, and numerous companies have now launched AI-assisted recruitment tools to support their recruitment efforts (2017).

AI has the ability to automate processes and low-level tasks by analyzing big data and rapidly estimating available solutions, reducing operational costs, assessing the skills and experience of candidates by utilizing algorithms, increasing the accuracy compared to human recruiters, and providing unbiased decisions towards candidates. Thus, not surprisingly, AI has become a hot topic in talent recruitment (Melder, 2018). Research has shown that introducing AI into the recruitment process has positive outcomes, such as streamlining work processes, reducing workload by automating candidate sourcing and removing bias (Heilmann, 2018). Studies conducted by Dana, Dawes, and Peterson (2013) argue how humans are notoriously bad at selecting the right candidates, and a meta-analysis conducted by Kuncel, Klieger and Ones (2014) show that algorithms can outperform human experts in hiring by at least 25%, regardless of job type.

On the other hand, while AI can make recruitment smarter, Seseri (2018) claims that AI is far from able to autonomously make decisions about who is the right candidate for the job. Furthermore, research on the use of AI in recruitment requires more studies to understand the impact AI has on the candidate experience. This is essential for, among other things, candidates' perceptions of employer attractiveness, their intentions to accept a job offer, and whether they would recommend the employer to others (e.g., Bauer, Maertz, Dolen, & Campion, 1998; McCarthy et al., 2017).

The "candidate experience" refers to a job candidate's perceptions of and experiences with the employer's recruitment, sourcing, interviewing, hiring, and onboarding processes (Allden & Harris, 2013). Ployhart and Ryan (1997) examined the candidate experience through the lens of attribution theory and focused on the

process of how applicants perceive and react to recruitment and selection decisions, as a result of perceptions of procedural justice, referring in this context to perceptions about the fairness of processes or systems in to a selection decision (1997). Research on traditional recruitment and selection procedures has attempted to identify what makes for good and bad candidate experiences. For example, in a study of MBA students, Tyler and Bies (1990) found that when job candidates were not allowed to express their point of view, they perceived the recruitment process as unfair (1990). Another similar study by, Ployhart and Ryan (1997) suggest that when job candidates do not perceive the recruitment process as fair, a common reaction is lower intentions for recommend a friend to apply to the company or reapply in the future. Furthermore, Ababneh, Hackett, and Schat (2014) argue that a negative candidate experience would lessen the candidate's intention to recommend a friend to apply and enhance a negative perception of the employer and the likelihood of the candidate litigating against the organization. They further emphasize that the candidate experience in a selection procedure is vital for all organizations striving to attain efficiency and effectivity (2014).

Showing concern for job candidates' experience with regards to the perceived procedural justice of the organization's recruitment and selection processes is essential, as candidates who do not perceive the recruitment process as fair could retaliate in different ways. For example, candidates could post negative reviews on social media (SoMe), which may hurt the organization's reputation as SoMe have the potential of sharing negative feedback broadly (Bakshy, Rosenn, Marlow & Adamic, 2012). They could also engage in "ghosting," which is when an applicant fails to show up for an interview or work after they are accepted for a position. Typically, it results in costs that could have been avoided, such as recruiters using their time on an interview where the candidate does not show, or if the selected candidate does not show up for work, and the recruitment process must be repeated, which is costly for the organization as this process often is both time-consuming and resource-intensive (Le Prevost, 2011).

Candidates with particularly bad experiences could boycott the organization's product. Virgin Media estimated a loss of around 5.4 million dollars due to canceled subscriptions resulting from poor candidate experiences (Steiner,

2018). It is fair to assume that candidates with a poor experience and who discourage their friends from applying and have less intention for reapplying, may weaken the organizations brand name. Chhabra and Sharma (2014) argue that brand name is one of the most preferred organizational attributions for attracting applicants and have a strong positive relationship with the likelihood of candidates applying. This indicates that candidates who feel unfairly treated may weaken one of the most important attributions of the organizations, to attract applicants and making them apply. These examples highlight the business importance of treating candidates fairly and with respect.

Several theoretical and practical contributions have been made in research examining candidate experience concerning traditional recruitment and selection processes. To our knowledge, there are no studies that explicitly focus on how candidates' perception of procedural justice is facilitated (or undermined) in AI-assisted recruitment and selection processes and the implications of these perceptions. Given that AI is increasingly used in recruitment processes, a better understanding of how applicants perceive and react to AI-made recruitment decisions is timely (Melder, 2018). Therefore, a primary intention of our study is to fill this gap in current research, and in doing so, enlighten organizations about how to make candidates feel more fairly treated during AI-assisted recruitment and selection processes. Also, the consequences of not making sure that candidates feel fairly treated, particularly as it relates to candidates' intentions to recommend a friend to apply or reapply in the future.

Furthermore, our research intends to explore the role that psychological entitlement plays in how candidates perceive and react to selection procedures and decisions made in AI-assisted recruitment processes. Entitlement in simple terms can be understood as an individual's sense of "deserving a more positive outcome than others" (Zitek, Jordan, & Leach, 2010, p. 246). Zitek et al.'s (2010) research suggest that individuals may feel wronged when they experience an outcome that deviates from what they believe they deserve, which may end up as expressed anger or frustration towards the organization. In study one, we examine whether candidates with high psychological entitlement are more likely to experience an AI-assisted recruitment process as unfair, and in turn, react more strongly against this

process. Further, in study two we examine whether the manipulation (rejection with or without reconsideration opportunity) affects the candidates' sense of entitlement and whether candidates' who feel wronged may to a lesser extent recommend a friend to apply or reapply themselves in the future. Gilliland (1993) defines reconsideration opportunity as the degree to which a recruitment procedure allows the candidates to challenge the decision-making process or get a second chance.

Our interest in exploring the relationship between AI-assisted recruitment and selection and applicants' perception of procedural fairness, and if entitlement may moderate this relationship, has led to the following research question:

"To what extent; (1) Does reconsideration opportunity as a feature of an AI-assisted recruitment process facilitates a better candidate experience? (2) Does exposure to this feature result in a greater experience of reconsideration opportunity, and – in turn, greater intention to recommend a friend to apply or to reapply in the future? Moreover, (3) does psychological entitlement moderate how candidates perceive and react to AI-assisted recruitment and selection decisions, or is it an outcome of a procedurally unjust process?"

2.0 Literature Review and The Theoretical Framework

2.1 Candidate Experience

During the late 1980s, *applicant reactions* to recruitment methods emerged as an essential area of research, and practitioners wanted to examine selection procedures from the viewpoint of applicants (Hausknecht, Day & Thomas, 2004; McCarthy et al., 2017). This came in contrast to the heavy focus on the organizational perspective of recruitment methods that had been in place for several decades (Ababneh & Hackett, 2014). The concept of applicant reactions refers to individual attitudes, cognitions, and specific emotions that are experienced because of the recruitment process itself (Ployhart & Ryan, 1997). In simpler terms, it refers to candidates' perception of fairness concerning the recruitment process, the sense of anxiety they might feel during this process, and different levels of motivation (McCarthy et al., 2017). The concept of applicant reaction is often used interchangeably with candidate experience, which is defined as how candidates perceive and react to the experience of procedural fairness in an organization's

recruitment, sourcing, interviewing, and onboarding process (Allden and Harris, 2013). Therefore, for the sake of clarity, we would only use the wording "*candidate experience*" further in this thesis paper.

One of the more known researchers who studied candidates' reactions is Stephen Gilliland who in 1993 developed and introduced a model of candidate perception based on organizational justice theory (McCarthy et al., 2017, p. 1695). This model, elaborated in section 2.2, has been the foundation for a vast amount of research interested in how candidate experience relates to candidates' intention to accept a job offer, recommend the organization to a friend, and how attractive the employer is to others (2017). However, the model of Gilliland is not without criticism. For example, researchers such as Ryan and Ployhart (2000) and Chan and Schmitt (2004) both questioned whether candidate experience plays a role in actual behavior, as it relates to candidates' reactions to the recruitment process. To date, there are still relatively few studies done that directly explore behavioral outcomes of candidate experience (Hausknecht, Day & Thomas, 2004; McCarthy et al., 2017). However, research indicates that outcomes are likely to be affected by the candidate's perceptions that the procedures used to come to a hiring decision are fair. Perceiving a low level of fairness in the recruitment process is likely to trigger negative affect (Geenen et al., 2012), and may result in lower intention to pursue the job and a lower intention of recommending the job to others (McCarthy et al., 2017). However, candidates' who experiences the process as fair may express positive behavioral intentions towards the organization (McCarthy et al., 2013). Furthermore, Matt Doucette (2015) argue that the candidate experience matters more now than ever before. He suggests that a candidate's experience is quickly shared in today's connected world, for example, through online reviews. He further argues that if just half of the candidates your company interact with remain interested, the company would significantly decrease the issue of acquiring talents (2015).

2.2 Procedural Justice in Recruitment Processes

Procedural justice as a concept has been used by researchers to explain how individuals react to different organizational outcomes (e.g., policies, routines, job redesign, promotion) (Leventhal, 1980). Consider the following scenario. When

visiting an organization and asking the employees working there how they feel about their organization, co-workers, position, policies, pay, and other similar topics. Often, these types of conversations inevitably end up with issues of fairness and unfairness. Answers like "they treat everyone fairly," or "someone always seems to be favored when it comes to promotions" often reflect an underlying concern about fairness, or the lack of it (Greenberg, Colquitt & Zapata-Phelan, 2005). The concept of fairness or justice is used interchangeably by most social scientists to describe comments like those presented above. Employees in an organization strive to be treated fairly, leaders are trying to treat subordinates fairly, and everyone is troubled about what would happen when these expectations are violated (2005). The scenario above is labeled in the literature as organizational justice – in other words, defined as how people in an organization perceive fairness.

The term organizational justice commonly involves four facets of perceived fairness; distributive justice, procedural justice, interpersonal justice, and informational justice. Distributive justice involves how the outcome is allocated, procedural justice is about how the rules and procedures are used to make decisions, interpersonal justice is about how sensitivity and respect are expressed towards the individual, and lastly, informational justice is about how the decision is explained and accounted for (Hausknecht, Day & Thomas, 2004). The general premise of organizational justice in a recruitment context is that job candidates evaluate recruitment procedures in the way of these four facets of justice, and this perception influence future behaviors (2004). However, our research limits itself only to include procedural justice, and the rationale behind our decision is the focus on candidates' perception of fairness when allowed to have their application process reviewed (e.g., reconsideration opportunity) by a human agent (HR manager).

Taking a look on the framework that connects procedural justice and recruitment processes, it is found that candidates perceive a recruitment process to be fair based on the extent to which procedures in the specific process seems to be fair (Bauer et al., 2001). According to Gilliland (1993), three aspects of the recruitment process are closely linked to a candidate's perception of fairness and thus a positive experience of the recruitment process. The first category is the *formal characteristics*, which indicate a candidate's possibility to perform well

during the recruitment process, how related the content of the recruitment process is to the job the candidate is applying for, the consistency of the process, and the reconsideration opportunity which refers to whether the recruitment procedure allows the candidates to challenge the decision-making process or get a second chance (1993). The second category is the explanation, which contains the opportunity for feedback, how open the process is, and how well information is shared. The third category is concerned with the *interpersonal treatment* and is based on two-way communication, treatment of the candidate, and priority of questions (1993). Gilliland argues that some aspects of the recruitment process are more appropriate in some setting than others. For example, he suggests that factors such as the type of selection procedures encountered by the candidate will influence how salience the specific procedural justice rule is for the candidate (1993). Consider an AI-assisted recruitment process, here, there is no human presence, so interpersonal treatment will be low although it is found to be the most salient rule in other studies (1993). Furthermore, there are no psychical paper-and-pencil tests, so the rule of job relatedness is neither as salient which means that other factors of the procedural justice paradigm become more critical for the candidate, such as reconsideration opportunity (1993).

2.3 AI Recruitment & Selection Processes – A New Era of Research Candidate Experience

According to a recent review of the literature, McCarthy and colleagues (2017) suggest that technological advances such as social media (SoMe), computing power which allows for analysis and collection of big data, and gamification in screening tools are just a few areas that should be added to research on candidates' experience of the recruitment and selection process. Further, when reviewing the existing literature and research on the role of technological advances on candidate experience, the most extensive area of research is on the technologically mediated forms of the employment interview (Langer, König & Fitili, 2018). For example, Bauer and colleagues (2004) did a study on the use of interactive voice response (IVR) in screening technologies. Their findings suggest that the only negatives with the use of IVR are a lower score in terms of procedural justice factors such as interpersonal treatment, two-way communication, and openness, which are explained by IVR being a "non-interpersonal" screening method. Nevertheless, they

found that IVR performed just as good as other labor-intensive methods in the other procedural justice factors and suggested that organizations can use IVR without any significant negatives in terms of fundamental perceptions of fairness (2004). Moreover, Sears and colleagues (2013) did a study on the effect of a videoconference (VC) on the interview and the candidate. They found that candidates rated the interview as less job-related and gave the interviewer a less favorable evaluation on trustworthiness and competence, compared to face-to-face interviews. At the same time, applicants in VC interviews received a lower rating and an overall less likability to being recommended for the position (2013). Although these examples are just a few of many studies done on recruitment activities, it goes to show that candidates seem to prefer to meet and speak with the recruiter rather than having a non-interactional meeting with the company. These examples illustrate the importance of considering how candidates react towards the organization when candidates are faced with a "less favorable solution."

In more recent times, research has shown that technology offers more possibilities for selection processes than previously anticipated (Langer et al., 2018). Researchers such as Brenner, Ortner, and Fay (2016) found that candidates in what they labeled as digital interviews could record themselves while answering predefined questions and then send it to the employer. Schmid Mast and colleagues (2015) found that machine learning and sensor technologies could allow for automatic recognition, interpretation, and analysis of social behavior. Moreover, Collmus, Armstrong, and Landers (2016) argue that hiring organizations could use the principles of games to evaluate candidates on personality, emotional intelligence, attention, and job fit. However, it is essential to note that research done on these approaches, especially the newer ones is scarce, and the lack of empirical studies which support the validity, reliability, fairness, and legality is vital to consider. Further, the research on how candidates experience and react to such approaches is small (McCarthy et al., 2017; Langer et al., 2018).

In relevance to our study, we believe the aspect of reconsideration opportunity to be highly appropriate for the context of AI-assisted recruitment. Included in the concept of reconsideration opportunity is the importance of giving candidates the opportunity to have their results reviewed. Similarly, research done

by Arvey and Sackett (1993) illustrates how procedures used to recheck results with a second measurement method are considered to facilitate higher procedural fairness. Furthermore, Murphy, Thornton, and Reynolds (1990) argue for similar findings in the context of drug testing, where findings show how the tests were perceived to be fairer when more than one method was used to approve the results. These findings support both Gilliland (1993) and Arvey and Sacketts (1993) arguments for why reconsideration opportunity is a salient feature of how candidates evaluate procedural justice.

2.4 Entitlement

Drawing on social justice theory and the work of Major from 1993, entitlement is a concept commonly used to describe "a set of beliefs and feelings about rights and entitlements, or legitimate expectations, based on what is perceived to be fair and equitable" (Lewis & Smithson, 2001, p. 1457). Put in simpler terms, Campbell describes psychological entitlement as "the feeling that one is more deserving of positive outcomes than other people are" (2004, p. 246). Considering these descriptions, it is fair to assume that entitled individuals feel that their surroundings owe them something (e.g., higher salary, power, positions, better grades) (O'Leary-Kelly, Rosen & Hochwarter, 2017), and according to Twenge & Campbell (2009), this is regardless of how they perform according to others.

Entitlement has been an increasing topic of interest for both researchers and the general public (Zitek & Vincent, 2015). Perhaps one of the primary reasons for why entitlement is such a hot topic among academics is because it is central when discussing how resources are distributed in a society, from social welfare to who gets the best tickets to a basketball game (Campbell et al., 2004). The feeling of being entitled is not limited to one specific group, and research show that workers in their 20's (Waters, 2003), professional athletes (Sullivan, 2003), celebrities (Carey, 2003), individuals who belong to a minority group (Rodriguez, 2003), and consumers (Fisk & Neville, 2011) may feel entitled (Campbell et al., 2004).

Studies suggest that there is a link between felt entitlement and previously experienced unpleasant events. For example, Sigmund Freud believed that individuals who had an unpleasant childhood felt entitled to not experience any more of life's' unfairness (Campbell, 2004). Furthermore, earlier research

suggests that individuals who feel they have been mistreated in the past inhabit a higher sense of entitlement than others who perceive their life story as more clement (Bishop & Lane, 2002). However, despite the acknowledgment of contextual influences, this research sees entitlement as a relatively stable, individual difference. Zitek et al. (2010), on the other hand, take a more dynamic perspective of entitlement. They propose that entitlement is more of a progressive mindset, in which an individual's sense of entitlement can vary depending on which experience is salient in the mind of the individual (2010). In simpler terms, they view entitlement as a mindset which is activated when an individual feel unfairly treated, or even when they are just reminded of a time when they felt unfairly treated (2010). Bridging these perspectives, Tomlinson (2013) argues that entitlement can be both a personality trait and a psychological state at the same time.

When looking at current research on entitlement, most studies have had a more narrative perspective (i.e., describing what individuals are entitled to versus what they deserve), while some newer research has taken a more object-oriented approach (Tomlinson, 2013). For example, legitimate entitlement in organizations may contain a proper process of disciplinary actions, equal opportunities when it comes to the employment processes, and other essential parts of the employment relationship. A distinction between legitimate entitlement and psychological entitlement is that privileges are caused by status, norms, and rules which guide decisions apart from any personal feelings of excellence (2013). In relating entitlement to the recruitment process, we can argue that if a candidate feels entitled to receive a more positive outcome than other candidates because of previous life events, it is a sense of psychological entitlement that is being displayed. On the other hand, if the candidate were previously working in the organization, but had to leave the organization because of downsizing, their sense of entitlement would be legitimate – because the organization formally employed them.

Individuals are biased in their search to verify their expectations and therefore are also more likely to find information that is true to their expectations. An individual who expects to be treated unfairly or fairly will often search for clues to verify their expectations (Bell, Ryan & Wiechmann, 2004). As

individuals with high levels of entitlement tends to believe they get less than they deserve (Byrne, Miller & Pitts, 2009), one may argue that candidates with a higher degree of entitlement might be more likely to find indications in the recruitment process that confirm perceptions of unfairness and as a result see the recruitment process are procedurally unjust.

In relevance to our study, we found entitlement to be of interest as it is indicated to influence different organizational contexts (O'Leary-Kelly et al., 2017; Fisk, 2010). For instance, Psychological entitlement is associated with a higher level of co-worker abuse, (Harvey & Harris, 2010), increased levels of conflict with supervisors, higher turnover intention (Harvey & Martinko, 2009) and a higher willingness to participate in unethical pro-organizational behavior (Lee, Schwarz, Newman & Legood, 2019). Researchers express their concern that if individuals sense of entitlement becomes more prevalent, it may cause trouble or implications for all social institutions, also organizations. Furthermore, today's organizational scientists have already started to suggest that human resource practices need to change (e.g., selection and retention) to accommodate what is perceived by corporate managers as an increasingly entitled workforce (O'Leary-Kelly et al., 2017; Fisk, 2010).

3.0 Conceptual Research Model and Hypotheses

As mentioned in the literature review, there has been a keen interest among researchers to explore the relationship between perception of fairness and candidate reactions (Konradt, Warszta, & Ellwart, 2013). Reviewing available research shows how the primary focus of most researchers has been on the interaction between humans in the recruitment process, and not on the interaction between automated recruitment processes and candidates. Although most of the current research has focused on the human-vs-human interaction, Dineen, Noe, and Wang (2004) did a field study where they examined the effect of four procedural justice rules on the perceived fairness of the Web-based recruitment solution, where reconsideration opportunity was one of the rules. In addition to the procedural justice rules developed by Gilliland, Dineen and colleagues also added a fifth predictor, namely automated versus human decision agent. Although their results showed how consistency and the ability to express additional information was most salient for

candidates when they evaluated procedural fairness, reconsideration opportunity and who was the decision agent followed closely and was deemed very salient (Konradt, Warszta, & Ellwart, 2013). Given the results of Dineen and colleagues (2004) study, and Gilliland's (1993) statement about how the importance of each justice rule is based on the recruitment setting, we find it suitable to exclude most of the procedural justice rules and focus on the formal characteristics, in particular, reconsideration opportunity. Our conceptual model (see Figure 1) is therefore built on the idea that a candidate's reaction to an AI-assisted recruitment process is caused by factors which the organizations can control (procedures, policies, tools) and elements out of their control (the candidate's sense of entitlement).

Entitlement Intention to reapply in the future Reconsideration Experienced Study 1 opportunity provided reconsideration in AI-assisted Intention to opportunity recruitment recommend a friend to apply Procedural Candidate Treatment Condition iustice rule behavior Entitlement Intention to reapply in the future Reconsideration Experienced opportunity provided Study 2 reconsideration in AI-assisted Intention to opportunity recruitment recommend a friend to apply Candidate Treatment Procedural Condition justice rule behavior

Figure 1: Our conceptual research model

To elaborate for our model, we expect that not providing candidates with the opportunity to have the results of a negative AI-assisted recruitment decision (i.e., the rejection of the candidate) reconsidered by a human agent will be negatively related to the candidate's experience of reconsideration opportunity, thus reflecting that a vital aspect of procedural justice is not facilitated in this context. On the other hand, providing candidates with the opportunity to have this decision reconsidered by a human agent will be positively related to job candidates' perceptions of reconsideration opportunity, thus promoting procedural justice despite the negative decision. Further, we expect that the experience of reconsideration opportunity will be positively related to candidates' intentions to recommend a friend to apply to a position, and to their intention to reapply for another position in the future, even though they are rejected by the AI-assisted recruitment tool. Accordingly, we expect that the job candidate's experience of reconsideration opportunity will mediate a positive relationship between their experience of being rejected in an AI-assisted recruitment process and their intentions to recommend a friend to apply for a position, and their interest to reapply for another position in the future, when they are given the opportunity to have this rejection decision evaluated by a human agent.

Entitlement is included in the conceptual model as an individual factor that could amplify the expected negative relationship between the lack of provided reconsideration opportunity and the candidate's experience of reconsideration opportunity or attenuate the expected positive relationship between provided reconsideration opportunity and the candidate's experience of reconsideration opportunity. Further, we expect that entitlement will attenuate the positive relationship between the experience of reconsideration opportunity and the job candidate's intentions to recommend a friend to apply to a position, and to their intention to reapply. The only real difference between study 1 and study 2 is how entitlement is measured and analyzed. In study 1 we view entitlement as an individual trait, while in study 2 we see it as a state and try to see if we can impact how entitled our respondents feel through our treatment conditions. Our argumentation for each of these hypotheses is elaborated in the following sections.

3.1 Hypothesis relating the provision of reconsideration opportunity with job candidate's experience of reconsideration opportunity

As earlier mentioned, organizational justice theory assumes that the perception of justice is determined by an individual's behavioral, emotional, and cognitive reactions (Konradt, Warszta, & Ellwart, 2013; Ployhart & Ryan, 1997).

Accordingly, it is fair to assume that candidates react to an AI-assisted recruitment process individually and that several factors determine the outcome. For example, in a face-to-face interview, the candidate has the opportunity to express themselves both through verbal and non-verbal communication and is not restricted by the highly standardized setting of AI-assisted recruitment. Moreover, technological recruitment solutions may harm a candidate's perception of fairness by eliminating the interpersonal aspect of the recruitment process (Konradt, Warszta, & Ellwart, 2013). According to the reconsideration opportunity principle, it entails a candidate's possibility to (1) have their results rechecked, or (2) appeal to a decision that is made. In relevance to AI-assisted recruitment processes, it is fair to assume that when several of the central elementals that creates the framework for how perception of fairness is evaluated is not present, candidates would perceive the opportunity to have an HR manager recheck their results or appeal the automated decision as salient (2013). Consequently, we hypothesize that:

Hypothesis 1: Being rejected in an AI-assisted recruitment process without being given the opportunity to have this decision evaluated by a human agent will be negatively related to the job candidates' perception of reconsideration opportunity. On the other hand, being rejected by an AI-assisted recruitment process while being given the opportunity to have this decision evaluated by a human agent will be positively related to the job candidates' perception of reconsideration opportunity.

3.2 Hypothesis predicting perceptions of reconsideration opportunity as a mediator in the relationship between AI recruitment process rejection and employee outcomes

A meta-analytic study done by Hausknecht, Day, & Thomas (2004) presented evidence for how procedural justice and different outcomes are positively related, yet only of a small to a medium degree. The constructs labeled under the "different outcomes" umbrella was the intention to recommend the organization, intention to accept a job offer and organizational attractiveness. In their study, they found that intention to recommend the organization to others had a moderate positive relationship with perception of fairness, while the intention to reapply had a small positive relationship (Konradt, Warszta, & Ellwart, 2013). Considering how earlier

research has shown that there is a positive relationship between reconsideration opportunity and sense of fairness, it is fair to assume that when candidates in an AI-assisted recruitment process is given the opportunity to recheck their results or appeal a decision, they will have a more positive experience of the process. Hence, increase the likelihood that they will reapply in the future or recommend a friend to apply if they experience the process through reconsideration opportunity as fair.

According to Gilliland and Hale (2005), it is towards the end of the recruitment process that reconsideration opportunity becomes more critical for the candidate than other procedural justice rules such as information, evaluation procedures, and tests, as that is often more important during the beginning of the process and triggered by their motivation to do well. Furthermore, according to Schleicher and colleagues, reconsideration opportunity would likely become increasingly important after negative feedback (rejection). For instance, if the candidate is not presented with information or the possibility for reconsideration opportunity, they may fall back on other justice rules and base their perception of fairness, likelihood to recommend a friend or reapply in the future on unwanted criteria (Schleicher, Venkatarmani, Morgeson, & Champion, 2006). Hence, it is fair to assume that candidates' experienced reconsideration opportunity will function as a mediator between the actual action of being rejected and their intention to recommend a friend or reapply in the future. Therefore, based on these arguments, we hypothesize that:

Hypothesis 2: Job candidates' experience of reconsideration opportunity will mediate a positive relationship between job candidates' experience of being rejected in an AI-assisted recruitment process and their intentions to recommend a friend to apply for a position, and their interest to reapply for another position in the future, when candidates are given the opportunity to have this rejection decision evaluated by a human agent.

3.3 Hypotheses predicting entitlement as a moderator of the relationship between AI recruitment process rejection, perceived reconsideration opportunity, and employee outcomes

Reviewing the literature on entitlement and equity theory, entitlement was defined as a feeling of deserving more than others, while equity theory is defined as the process of comparing yourself to others (Byrne, Miller, & Pitts, 2009). As mentioned earlier, researchers express their concern that if today's workforce becomes more entitled, it may cause trouble or implication for organizations in the future. Also, according to O'Leary-Kelly and colleagues (2017), today's HRM practices needs to accommodate for what is being perceived as an increasingly entitled workforce. Connecting these concepts to HRM practices and recruitment to be exact, equity theory states that candidates' compare the outcomes of the recruitment process (hire decision) to the input they invest on the employer (time) to form an outcome-to-input ratio. If someone is susceptible to inequity, they are considering to be entitled. Thus, feeling more deserving for a positive outcome of the recruitment process than others (Byrne, Miller, & Pitts, 2009). Furthermore, a candidate that has high psychological entitlement may, to some extent, perceive each situation as an unfulfilled expectation because they expect more then they deserve. Hence, entitled candidates are likely to be disappointed with the organization's recruitment efforts unaffected by quality or value (2009). On the other hand, it is fair to assume that those who are perceived to be low on psychological entitlement will have a higher acceptance of unfavorable outcomes and will to some extent remain satisfied if they get rejected in an AI-assisted recruitment process. Therefore, we have hypothesized the following:

Hypothesis 3(a): The negative relationship between being rejected in an AI-assisted recruitment process without the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity will be moderated by the candidate's psychological entitlement, such that the negative relationship will be stronger if the candidate has high psychological entitlement (moderator).

Hypothesis 3(b): The positive relationship between being rejected by an AI-assisted recruitment process with the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity will be moderated by the candidate's psychological entitlement, such that the relationship will be weaker if the candidate has high psychological entitlement (moderator).

Hypothesis 3(c): The positive relationship between perceived reconsideration opportunity and a job candidate's intentions to recommend a friend to apply for a position, and their interest to reapply for another position in the future, will be moderated by the candidate's psychological entitlement, such that the relationship will be weaker if the candidate has high psychological entitlement (moderator).

3.4 Hypothesis predicting entitlement as a state triggered by rejection and that it moderates the relationship between AI recruitment process rejection, experienced reconsideration opportunity, and employee outcomes

In addition to the arguments for hypothesis 3 a, b, and c, we believe that AI-assisted recruitment processes may trigger a sense of entitlement in the candidate's and we predict that candidates' who are being rejected without reconsideration opportunity will express a higher sense of entitlement than those who received reconsideration opportunity. As a result, those with a higher sense of entitlement will perceive the process as less fair and may, to a lesser extent wish to recommend their friends to apply or reapply themselves if the opportunity arises.

These assumptions and predictions are based on the idea of Zitek and colleagues (2010) where they argue that entitlement from is more of a progressive mindset then trait, and that it is the experience that is most salient in the mind of the individual that trigger their sense of entitlement. In simpler terms, they state that this sense of entitlement is triggered or activated when individuals feel unfairly treated, or if they are reminded about a time they were unfairly treated (2010). In contrast to hypothesis 3 a, b, and c, which only measured entitlement from a more general perspective, we had to conduct a separate study to measure how the respondents react to the rejection and if their sense of entitlement would increase based on their exposure to the treatment conditions of the experiment. Based on the assumptions that entitlement can be a state triggered by an unfair event, we predict the following hypothesis;

Hypothesis 4: Being rejected without reconsideration opportunity will cause an increase in candidates' sense of entitlement and this increase in entitlement will strengthen the negative relationship between being rejected without reconsideration opportunity and their experienced reconsideration opportunity and ultimately their intention to recommend a friend or reapply in the future.

4.0 Method and Research Design

As researchers, the choice of research design is among other issues to decide on how we should collect data, how we can analyze them, how we can interpret them, and how it can be an answer to our defined problem. Therefore, to test and examine our hypothesis, we have chosen a quantitative approach, using an experimental design. A quantitative approach is selected when there is a need for establishing a general relationship between two or more concepts, given a significant number of observations (Ang, 2014). In the process of establishing a connection between concepts, multiple observations provide a higher degree of accuracy. Thus, increasing our possibility to be sure about our predictions (Warne, 2014).

According to Kirk (2012), prudently designed and executed experiments is one of the most potent methods of science to establish causal relationships. When experimenting, the aim is to explore the possibility that a change in the independent variable causes a change in the dependent variable (Saunders, Lewis & Thornhill, 2016). Also, experiments have shown to establish a strong internal validity (Bryman and Belle, 2015). As the purpose of our research is to compare the respondent's perception of reconsideration opportunity between different experimental conditions (rejection without the opportunity to have results reviewed by a human agent, rejection with the opportunity to have results reviewed by a human agent), we have chosen a between-subjects experimental design (Charness, Gneezy & Kuhn, 2012). The respondents were randomly divided into two treatment conditions, which will be explained in detail in chapter 4.2.

Table 1: Experimental conditions

CONDITION ONE

CONDITION TWO

Subjects in experimental condition one did not receive the opportunity to have their results reviewed by a human agent (HR manager)

Subjects in experimental condition two received the opportunity to have their results reviewed by a human agent (HR manager)

Note. Subjects were divided randomly into each condition with minimal interference by the researchers.

4.1 Subjects

Our raw data sample consisted of 129 bachelor and master students from Norwegian Business School (BI) and Kristiania University College (HK). We conducted two studies with two experimental runs in each. Study one was conducted at BI and had in total of 74 respondents. Data for this study were collected in two waves (wave 1, 37 respondents; wave 2, 37 respondents). Study two, conducted at HK, had 55 respondents. Data for this study were collected in two waves (wave 1, 29 respondents; wave 2, 26 respondents). As we adjusted how entitlement plays a part in study two, we treated each study as individual studies and have not pooled them together for data exploration. The rationale behind choosing only students for our experiments is because it is easier to allocate a large number of respondents in a single point in time. We conducted our experiments during ongoing lectures, which resulted in us being able to target relevant subjects in a timely manner. Furthermore, students are a good subject group because they are often targeted for positions where AI recruitment software will likely be present.

Before we started to explore our hypothesis and test if our manipulation had worked, we wanted to control for outliers. To do so, we used Mahalonobis, Cooks, and Leverage distance tests (Kannan & Manoj, 2015). In short, *Mahalonobis distance* is multivariate metric to measure the distance between a point and a distribution, *Cooks distance* is an estimate of the influence of a data point when performing a regression analysis, and *Leverage point* is a way to measure the distance, or how far the independent variable value of an observation is from other observations in the dataset (2015). Controlling for outliers, we removed 0

respondents as none failed two of the three tests used to identify outliers. Five of our respondents failed the Cooks test but passed the other two, hence good enough to be kept in our datasets (2015). Table 2 and 3 shows the total respondents in each study and the distribution of subjects among included demographic variables and experimental conditions.

Table 2: Descriptive statistics table for study one

VARIABLE	ITEM	FREQUENCY	PERCENTAGE
Gender	Male	22	29,7
	Female	32	43,3
	Missing	20	27
	Total	74	100
Age	23 years or younger	26	35,1
	24 to 26 years	16	21,6
	27 to 29 years	5	6,8
	30 years or older	7	9,5
	Missing	20	27
Education	Bachelor's degree	37	50,0
	Master's degree	37	50,0
Manipulation	Rejection with Reconsideration Opportunity	42	56,8
(Condition)	Rejection without Reconsideration Opportunity	32	43,2
Rejection stop	Stopped after rejection	17	23,0
•	Continued after rejection	57	77,0

Table 3: Descriptive statistics table for study two

VARIABLE	ITEM	FREQUENCY	PERCENTAGE
Gender	Male	18	32,7
	Female	29	52,7
	Missing	8	14,5
	Total	55	100
Age	23 years or younger	28	50,9
	24 to 26 years	12	21,8
	27 to 29 years	4	7,3
	30 years or older	3	5,5
	Missing	8	14,5
Manipulation	Rejection with Reconsideration Opportunity	27	49,1
(Condition)	Rejection without Reconsideration Opportunity	28	50,9
Rejection stop	Stopped after rejection	5	9,1
	Continued after rejection	50	90,9

4.2 Procedure, Study 1

We used a self-report questionnaire presented in the experimental context to collect data on their degree of entitlement, their perceived sense of fairness through reconsideration opportunity, and their likelihood to recommend a friend or reapply in the future. We also used the questionnaire to collect data on variables such as age, gender, and education. The self-report questionnaire, along with some components of the experimental setup, was developed and distributed using Qualtric. The experiment itself was constructed to mimic an authentic AI-assisted recruitment process. We chose an authentic context for our research as we wanted

our respondents to experience the experiment as "real." The rationale behind our choice is to ensure that they answer our self-report questionnaire as honestly as possible (Hausknecht, Day & Thomas, 2004).

To create that "authentic" feeling, we created a fictional company (Cyrax) and a company website inspired by the same structural logic as used by real companies (see Appendix 1). The website was built using weebly.com, which is a free online webpage creator software. The pictures used on the company website were found online under the "Creative Commons Zero (CCO)" license. In short, the pictures are therefore free to use for both personal and commercial use (Pexels, 2019).

Another activity that was used to create an authentic feeling for our experimental participants was to formulate an inspiring text on the "internship" section of the website. Furthermore, as we wanted our respondents to go through the internship webpage before moving onto the Qualtrics-based portion of the experiment, we incorporated the link to Qualtrics and the button "apply," directly on the webpage. Before the respondents continued into the self-report questionnaire, we asked them to fill in either a link to their LinkedIn profile or if they did not have a LinkedIn profile, answer a few questions about work experience and education. The rationale behind this decision was that we wanted them to believe that their LinkedIn profile was a part of the AI decision algorithm. To protect the anonymity of our respondents, no actual data from the fictional company website was stored.

As the experiments were conducted in classroom settings, we started each experiment by telling the subjects that we were master students at BI and were writing our master thesis in collaboration with Cyrax Consulting (the fictional company). Furthermore, we told them that we were testing the company's AI-assisted recruitment software and that we wanted to collect their feedback on the system to further improve the software before Cyrax Consulting could launch their product. We also announced that the company had an internship position open and that the recruitment for that position would be done right now through the process of testing the software.

During the experiment, subjects transitioned from the fictional company website to a Qualtrics-based component where they were asked to answer a range of questions about their personality, which also included items related to psychological entitlement. The questions related to personality (Big 5) were included only to increase the authenticity of the experiment, as personality tests are one the most popular form of psychological testing in recruitment processes (Carless, 2009). Next, respondents were asked to complete five short ability tests. The results from these ability tests were never measured or analyzed and were of no interest for our study. They were only used to increase the authenticity of the experiment. Also, much like personality tests, ability tests are one of the most popular ways of conducting psychological testing in recruitment processes (2009). After completing these measures, the experimental participants were randomly assigned one of the two treatment conditions. One group was rejected and was not given the opportunity to have the results of the process evaluated by a human agent (an HR manager). The other group was provided the opportunity to have their results rechecked by an HR manager. Participants had to check a box if they wanted to have their results reviewed. After the rejection was given (either condition one or two), the subjects were asked to answer questions regarding how they perceived the fairness of the process (including reconsideration opportunity) and how likely it was that they would recommend a friend to apply for a position or if they were interested in reapplying for another position in the future. Although we were present during the experiment, we had minimal interference with the subjects. Besides the introduction, we let them work alone and only contributed if someone had questions regarding the wording of the questions.

After the experiments were completed, we held a short debrief where we told the students the purpose of the study, what we had measured, and that the position and company were never real.

4.3 Measurement, study 1

When we designed our self-report questionnaire, we wanted to use well-known and tested measurement scales. A shortlist of these inventories is presented in Table 4, while the complete list of each question asked in the questionnaire can be seen in Appendix 2 for study one and Appendix 3 for study two.

Table 4: Main measures used in our research

VARIABLE	AUTHOR	NUMBER OF ITEMS
Personality (Big Five)	Rammstedt and John (2006)	20
Entitlement	Campbell et al., (2004)	9
Procedural Justice	Colquitt (2001)	7
Reconsideration Opportunity	Bauer et al., (2001)	5
Intention to reapply to the organization	Inspired by McCarthy et al., (2017)	1
Intention to recommend a friend	Inspired by McCarthy et al., (2017)	1

The first inventory of questions we decided to include is Rammstedt and John's short version of The Big Five Inventory (2006), which in short was four questions about each of the five personality factors. The personality questions were scored on a 5-point Likert-scale ranging from 1 (strongly disagree) and 5 (strongly agree). The reason why we chose a smaller and shorter version of the personality measurement inventory, was because of the limited time we had to conduct our experiments and not to lose the interest of our respondents. Furthermore, as the goal of the personality questions was to create a sense of credibility, we found it unnecessary to spend too much time on this part of the experiment.

Another area of interest is the moderating effect of entitlement. However, since it is not common to include questions such as "I honestly feel I am just more deserving than others" in a recruitment process, we had to camouflage the entitlement questions in between the personality questions. We did so by randomly sorting the questions and added, "I see myself as someone who..." on the entitlement questions as well. The entitlement questions we used in our survey was based on the well-known Psychological Entitlement Scale (PES) by Campbell and colleagues (2004). Although the PES scale is based initially on a 7-point Likert-scale, we decided to use a 5-point Likert-scale to fit our personality questions and give the survey a more "trustworthy" appearance.

As our conceptual model illustrates, we wanted to investigate if there was a relationship between our experimental conditions and how the candidates' perceived the procedural fairness of the process through reconsideration opportunity. To measure the subject's sense of procedural justice and reconsideration opportunity, we used the same inventory that several researchers have used before us. The reconsideration opportunity questions were developed by Bauer and colleagues (2001), and the seven procedural justice questions were

developed by Colquitt (2001). As we used two different scales, we had to slightly modify them by adding "I feel..." before each question, some minor changes to the wording, and randomization to mix them. A 5-point Likert-scale was used to align these questions to the rest of the questionnaire. As Table 7 shows, these two scales correlate well with eachother and is highly significant (.400 **), which tells us that they to a large extent measure the same general construct (procedural justice), and we will therefore use the revised reconsideration opportunity scales by Bauer et al (2001) in our analysis as it fits our hypotheses well.

We wanted to investigate whether candidates' perception of reconsideration opportunity mediated the relationship between rejection in an AI recruitment process and employee outcomes. To do so, we included questions about the candidates' intention to reapply in the future and likelihood to recommend the organization to a friend. The questions we used are inspired by the work of McCarthy and colleagues (2017). A 5-point Likert-scale was used to fit the questions to the rest of the questionnaire.

Lastly, we included three demographic variables "Education, Gender and Age" to be able to compare groups. Education was added because we had access to one bachelor class and one master class at BI, gender was included to control for gender differences and age was included to see if there was a difference between younger and older students.

4.3.1 Coding our Variables

A vital part of scientific research is the development of hypotheses, which is a testable statement about the relationship between two or more variables. A variable in this sense is a logical cluster of attributes that can either be observed or measured and is expected to differ between people in the population (Bryman & Bell, 2015). When we formed our hypothesis, we needed to identify which of our variables was independent and which was the dependent variable when testing the relationship between them. As most of our hypotheses are directional relationships, positive or negative, we needed to code our variables in such a way that it makes sense to include them in our model. In short, a positive relationship means that an increase in x will indicate an increase in y, while a negative relationship indicates that an increase in x will cause a decrease in y (2015).

Gender, manipulation, and reversed manipulation is considered a dichotomous variable which is simply a variable with only two responses. Dichotomous variables are often defined as a nominal variable, but they are usually a little different as they only include codes like yes/no and male/female while a nominal variable is usually a simple non-ranked list of categories (2015). Furthermore, we also have several ordinal variables which are variables that contain rank-ordered attributes from lowest to highest, and as our self-report questionnaire is based on a 5-point Likert-scale, it is most suitable to define those variables as ordinal as the questions are defined by ranked categories of answers from (1) strongly disagree to (5) strongly agree. What this means, is that we believe each single-unit difference between (1) to (2) is approximately the same as between (4) and (5) (2015). Although some researcher tends to treat single Likert-scale questions as interval data, this is not recommended as there is no way to ensure that respondents perceive the difference between "disagree" and "strongly disagree" the same as how they may perceive the difference between "agree" and "strongly agree" to be (Bertram, 2007). Because of this, we have coded the variables "recommend a friend to apply" and "Intention to reapply in the future" as ordinal variables. However, as it is appropriate to threat a summed cluster of Likert-scale questions as interval, we will use mean score on these scales and use parametric tests such as analysis of variance (ANOVA) and linear regression analysis to test these variables (2007).

4.4 Data Analysis and Results, study 1

To understand and investigate our dataset, we used a statistical software called SPSS 25, short for "Statistical Package for the Social Sciences" and the number represent the current version. Through SPSS, we initiated first some descriptive statistics to see the frequency of respondents on our primary variables and if there was a skewness in our dataset (see Table 2-3). Although our sample is not large, we noticed we had a normal distribution on both variables "education and gender." However, when exploring the variable "age," we noticed that there was a significant skewness as the majority of our respondents (56,7%) was below 26 and only 16,3% above. Considering the skewness, we decided to not explore the variable "age" any further in our analysis. Furthermore, we added the variable "rejection stop" to Table 2-3. However, it has not been included in any further analysis as the purpose of this

variable was only to identify how many respondents who stopped filling in the survey when our treatment conditions rejected them.

When including several different concepts, there is the risk that they are somewhat conceptually close, and item contamination may emerge, resulting in threat towards discriminant validity (Kuvaas, Buch & Dysvik, 2016). As we wanted three separate constructs, we used Exploratory Factor Analysis (EFA) to ensure that each measurement scale did not load on several components, ensuring discriminant validity. To be specific, we used principal component analysis with a Promax rotation on all the original scales to see if they all loaded on a single component or several. The entitlement scale by Campbell and colleagues (2004) had a few questions that loaded on several components, and some questions were therefore removed, indicating a need for a revised scale. As we wanted to get an acceptable 3-factor structure, we had to remove several questions from all three scales, and the result is shown in Table 5 and 6. The rationale behind our choice is that we wanted a clean 3-factor structure and ensure that all items loaded at .500 or higher on the target construct (Nunnally & Bernstein, 2007). As Table 5 shows, each item has a loading above .500, and we can, therefore, conclude that it is of a satisfactory manner, and further analysis can be conducted.

Table 5: Factor loadings for the revised measurement scales

		FAC	TOR LO	ADING
VARIABLE	ITEM	ONE	TWO	THREE
Entitlement	I see myself as someone who honestly feels more deserving than others		.63	
	I see myself as someone who believes that great things should come to me		.82	
	I see myself as someone who demands the best because I'm worth it		.61	
	I see myself as someone who believes people like me deserve an extra		.52	52
	break now and then			
	I see myself as someone who feels entitled to more of everything		.65	
Reconsideration	I feel satisfied with the chance to discuss my test results with someone			.86
Opportunity	I feel that the opportunities for reviewing my test results were adequate			.65
	I feel that I was given sufficient opportunity to have my test results			.51
	rechecked, if necessary			
Procedural	I feel that I had influence over the outcome arrived at by the recruitment	.79		
Justice	software			
	I feel that I have been able to express my views and feelings during the	.68		
	recruitment process			
	I feel that the recruitment process has been consistent	.69		
	I feel that the recruitment process has been based on accurate information	.82		
	I feel that the recruitment process has been free of bias	.63		

After finding an acceptable 3-factor structure, we made three revised measurement scales based on the original scales presented earlier. To further test the quality of our revised measurement scales, we wanted to investigate how well

our items measured the same general construct and produced similar scores. Hence, either low or high internal consistency. To do that, we analyzed the scale reliability (Cronbach's Alpha) and decided that each revised scale should be above a minimum threshold of .600, which can be argued to be a questionable score (DeVellis, 2016). As Table 6 show, all the original measurement scales had a Cronbach's alpha score above .700, which is defined as an acceptable score (2016). Taking a look at our revised measurement scales, we can see that the Cronbach's alphas are all above .600 and two above .700 which indicate that we can move on with our revised scales but should be careful when interpreting the results related to the variable "reconsideration opportunity."

Table 6: Reliability testing of original and revised scales

		RELIA	BILITY
VARIABLE	INDEX	ORIGINAL SCALE ^a	REVISED SCALE ^b
Entitlement	No. of items	9	7
	Cronbach's Alpha	.750	.728
Reconsideration Opportunity	No. of items	5	3
	Cronbach's Alpha	.743	.621
Procedural Justice	No. of items	7	4
	Cronbach's Alpha	.791	.788

^aOriginal item scales used by Campbell et al., 2004 (Entitlement), Bauer et al., 2001, (Reconsideration Opportunity), and Colquitt, 2001 (Procedural Justice). ^bRevised scales based on an accepted 3-factor structure and factor loadings.

Before we started to explore and see if our manipulation worked, we wanted to test the zero-order correlations between the variables included in our research. As Table 7 shows, there are several significant correlations between variables at different levels (*, **) and when looking further into the model, we can see that variable "Recommend a friend" and "Intention to reapply" correlate significantly with two of the revised measurement scales, but not with the revised entitlement scale. This result indicates that when nothing is being controlled for, recommending a friend and intention to reapply in the future correlates significantly with revised reconsideration opportunity and revised procedural justice scale. However, there is no correlation between the mentioned two variables and the revised entitlement scale.

 Table 7: Descriptive statistics and zero-order correlations

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VA	VARIABLE	z	M	SD	-	2	33	4	2	9	7	8	6	10	Ξ
1	1. Age	54	2.0	1.33	١,										
2	2. Gender	54	1.60	.50	20	,									
છ	Education	74	.50	.50	11	.41	,								
4	Recommend a friend	57	2.75	1.12	.24	09	-28	,							
5.	Intention to reapply	57	2.98	1.20	.21	07	19	.79	,						
9	Reconsideration opportunity full scale	57	2.95	275	.07	14	17	.53	.48	,					
7.	 Procedural justice full scale 	57	3.06	99.	90:-	28	-29	.51	36	.57					
∞i	Entitlement full scale	74	2.85	.56	.28	.20	00.	.28	.23	04	03	,			
9.	9. Revised Reconsideration opportunity scale	57	3.09	.78	.03	90:-	13	36	.40	90	.41	10			
10.	 Revised Procedural justice scale 	57	3.01	.75	01	25	-26	92	.43	58	96	01	.40	,	
11	 Revised Entitlement scale 	74	2.68	19.	.23	.27	.07	.13	.12	15	13	.93	18	10	,
													l		ĺ

Note. Only two decimals have been used to ease reading; green coefficients are significant at p < .05(*), while blue coefficients are significant at p < .0I(**). One-tailed has been used.

4.5 Manipulation Check, study 1

In the next step in our analysis, we wanted to check if our treatment conditions (rejection with and without reconsideration opportunity) worked. Thus, when we explore our dataset using a one-way ANOVA, we can be confident that our manipulations were successful. As Table 8 show, there is a significant difference between those who did get a rejection with reconsideration opportunity and those without F(1, 55) = 8,79, p < .004. Taking a closer look at the descriptive table, we can see that rejection without reconsideration opportunity had a mean score of 2.80, while those with reconsideration opportunity had a mean score of 3.38. The same significant difference can be visualized using boxplots, and as Figure 2 show, those who received the possibility to have an HR manager recheck their results scored higher on the questions regarding reconsideration opportunity. Furthermore, the boxplots show how the median line between the conditions is different, and the whiskers of condition "with reconsideration opportunity" is broader than those of the other condition. Interpreting the results, respondents who had reconsideration opportunity seems to vary more in their perception of fairness. Also, those who had the option to recheck their result by a human agent perceived the process to be fairer than those who did not get the same opportunity.

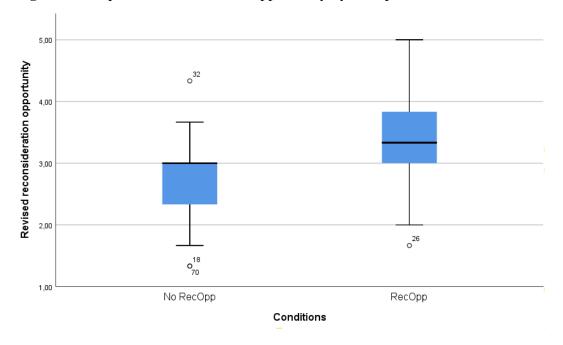
Furthermore, it is essential to calculate the probability of both type 1 and type 2 error. In other words, alpha error and beta error. The alpha error is the probability that we will reject the null hypothesis, when, in fact, it is true — in essence, finding a difference that is not there (Assmus, 2011). The minimum alpha value is set to $\alpha = p < .05$ in our study. The beta error is not specified like the alpha error is, it is instead determined by sample size, significance level, and effect size, and influence the beta value, and similarly, influences the power. Power is equal to 1 - the beta value and is the probability that we will detect a difference that is there (true difference). Beta value is the probability of a Type 2 error and is when we fail to reject a false null hypothesis (2011). With the following n = 57, and p < .004, and PES (Partial Eta Squared) .14, there is an 83% (observed power) chance to detect a difference that is there. As we know that power is equal to 1 - beta, solving for beta using power, we can see that the beta value will be equal to $\beta = .17$, or 17%. The probability of us making a type 2 error in this specific prediction is therefore 17% and considered low.

Table 8: Manipulation check through descriptive tables and one-way ANOVA.

DESCRIPTIVE TABLE		N	MEAN(SD)	SE
Reconsideration Opportunity	Without Reconsideration Opportunity	29	2.80 (.70)	.13
	With Reconsideration Opportunity	28	3.38 (.77)	.15
	Total	57	3.09 (.78)	.10
ONE-WAY ANOVA		DF	F	SIG
Reconsideration Opportunity	Between Groups	1	8.79	.004
	Within Groups	55		
	Total	56		
STATISTICAL POWER	PARTIAL ETA SQUARED	OBSERV	ED POWERa	SIG
Testing for type 2 error	.14		.83	.004

Note. a *Computed using alpha* = .05.

Figure 2: Boxplot; Reconsideration Opportunity by Manipulation



4.6 Hypothesis Testing, study 1

In *hypothesis 1*, it was predicted that being rejected in an AI-assisted recruitment process without being given the opportunity to have this decision evaluated by a human agent will be negatively related to the job candidates' perception of reconsideration opportunity. On the other hand, being rejected by an AI-assisted recruitment process while being given the opportunity to have this decision evaluated by a human agent will be positively related to the job candidates' perception of reconsideration opportunity.

As Table 9 show, our predicted hypothesis is supported (p < .004). This means that being rejected in an AI-assisted recruitment process without having

reconsideration opportunity will have a negative effect on how candidates experience the fairness of the process, while it will have a positive effect if the candidate is given the opportunity to have this rejection decision evaluated by a human agent. This negative or positive effect is illustrated by the coefficients presented in Table 9 (-.58/.58). Furthermore, the alpha error ($\alpha = .004$) is significant, meaning that if we assume that the rejection had no effect, the observed difference could be obtained in less than 1% of similar studies due to random sampling error. Also, the beta error ($\beta = .83$) tells us that there is a low probability for us to fail in detecting an effect that is present without us knowing about it. When we controlled for the effect of gender on our model, we noticed a non-significant correlation between the variables, the adjusted R-square decreased, and gender had a coefficient of -.11 and a significant level of p < .589. This tells us that our control variable had no significant impact on our results.

Table 9: H1; Descriptive table

DEPENDENT VARIABLE	MANIPULATION	DF	$R_{adj}^2(SE)$	F	T	COEFFICIENTS (SE)	SIG
Reconsideration Opportunity	With Reconsideration Opportunity Without Reconsideration	1	.12 (.73)	8.79	2.97	.58 (.19)	.004
Оррогиянту	Opportunity	1	.12 (.73)	8.79	-2.97	58 (.19)	.004
STATISTICAL POWER		PAR	TIAL ETA SO	QUARE	D	OBSERVED POWER ^a	SIG
Testing for type 2 error			.14			.83	.004

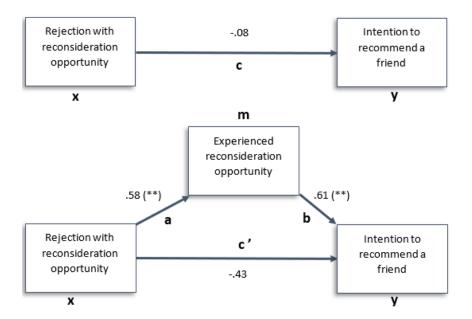
Note. n = 57, a. Computed using alpha = .05.

In *hypothesis* 2, it was predicted that job candidates' experience of reconsideration opportunity will mediate a positive relationship between job candidates' experience of being rejected in an AI-assisted recruitment process and their intentions to recommend a friend to apply for a position, and their interest to reapply for another position in the future, when candidates are given the opportunity to have this rejection decision evaluated by a human agent.

In order to test the mediation effect predicted in hypothesis 2, we used the PROCESS macro for SPSS. This macro opens up the opportunity to test both mediation and moderation models, or both combined to explore conditional indirect effects (Hayes, 2009). Furthermore, bootstrapping with a 95% confidence interval through 5000 resampling's was used to estimate indirect effects in our model. In

short, bootstrapping is a technique that is used to compute the indirect effect, *ab*, in each sample (Preacher & Hayes, 2004).

Figure 3: The mediated relationship between reconsideration opportunity and intention to recommend a friend.

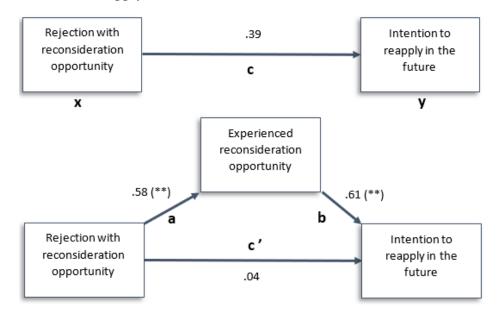


There are different models of complexity that can be used to measure the mediating effect between a predictor and the criterion (Preacher & Hayes, 2004). However, the model presented in Figure 3 is what researchers label as a "simple mediation" because it only includes one variable that is predicted to mediate the relationship between the cause (x) and outcome (y) (2004). The upper part of the model displays a simple relationship and is usually described as the total effect x has on y. Looking at the bottom part of the model, we find c' which is the direct effect between x and y when controlling for m (2004). Exploring Figure 3, we can see that there is a non-significant negative relationship (-.08) between rejection with reconsideration opportunity and intention to recommend a friend to apply. However, looking on the indirect path between rejection with reconsideration opportunity (x) and intention to recommend a friend (y) through experienced reconsideration opportunity is significantly associated with both rejection with reconsideration opportunity (x) and intention to recommend a friend (x).

For the variable revised reconsideration opportunity, the 95% confidence interval for the indirect effect between rejection with reconsideration opportunity and intention to recommend a friend (β = .35) did not include zero (.0604 to .7445), indicating a significant indirect effect (p < .034). However, as our prediction was that job candidates' experience of reconsideration opportunity will mediate a positive relationship between job candidates' experience of being rejected in an AI-assisted recruitment process and their intentions to recommend a friend to apply for a position, we can see based on our results that this effect is not present (c' = -.43). Also, as the direct effect (-.43) is larger than the total effect (-.08), and the symbols are different (+/-), we have what is called inconsistent mediation (MacKinnon, Fairchild, & Fritz, 2007). The reason for this inconsistent mediation may be a counterproductive effect of our experiments, where our manipulation of the respondents caused an opposing mediation effect (2007).

As we did not find support for the first part of hypothesis 2, a mediation effect between rejection with reconsideration opportunity and intention to recommend a friend through experienced reconsideration opportunity, the next section will explore if the variable "intention to reapply in the future" share the same inconsistent results.

Figure 4: The mediated relationship between reconsideration opportunity and intention to reapply in the future.



The model presented in Figure 4 illustrates the mediated relationship between rejection with reconsideration opportunity (.58**) and intention to reapply in the future (.61**) through experienced reconsideration opportunity. Same as in Figure 3, the total effect is not significant, illustrating that being rejected in an AIassisted recruitment process with the option to have a human agent review the results has a non-significant association with their intention to reapply or recommend a friend. Although the total effect of our models is not significant, it has become widely acknowledged by statisticians that total effect should not be used as a "warden" for mediation tests (Hayes, 2009). Thus, we can legitimately argue for the mediating effect of experienced reconsideration opportunity in our models and conclude that there is an indirect-only mediation (i.e., mediated effect between a x b but no significant direct effect between x and y) (Zhao, Lynch, & Chen, 2010). Comparing our models, we can see that when we include the mediation variable, it reduces the total effect in Figure 4 from .39 to .04 and the symbols are equal (+) while it had the opposite effect in Figure 3, from -.08 to -.43. Since the reduction in total effect in Figure 4 almost reached zero, we can argue that our mediation model explains an full mediation effect as it is almost impossible to reach a perfect mediation of .00 (Zhao, Lynch, & Chen, 2010). When we controlled for gender, we noticed that gender does not have a significant correlation with either intention to reapply or recommend a friend. Also, we found that gender only explained a minimal part of the variance in the variables intention to reapply in the future and was not significant (p < .618) and intention to recommend a friend to apply (p < .702). Hence, we can be confident that gender did not affect our results.

To summarize hypothesis 2, there is no significant direct relationship between being rejected by an AI-assisted recruitment process with reconsideration opportunity and candidates' intentions to recommend a friend or reapply in the future. Moreover, we can see that their perceived (experienced) reconsideration opportunity mediates their intentions to recommend a friend or reapply in the future. However, the results of the mediation in Figure 3 is inconsistent, while the results from Figure 4 predict a significant mediation indicating that when candidates' get rejected with reconsideration opportunity, it causes a positive increase (.58) in their experienced reconsideration opportunity. This increase in experienced reconsideration opportunity causes thereafter an increase (.61) in their intentions to

reapply in the future. The 95% confidence interval does not reach zero (.0663 - .7228) and is significant at p < .042 indicating that the mediation worked. We can, therefore, argue that hypothesis 2 is only partially supported because of the inconsistent findings related to recommending a friend.

In *hypothesis 3a*, it was predicted that the negative relationship between being rejected in an AI-assisted recruitment process without the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity will be moderated by the candidate's psychological entitlement, such that the negative relationship will be stronger if the candidate has high psychological entitlement (moderator).

Before we tested the hypothesis, we wanted to explore the connection between entitlement and experienced reconsideration opportunity and found an significant difference between each group F(13, 43) = 2,13, p < .032, meaning that there is a significant difference between how entitled candidates' rank their experience of reconsideration opportunity. Furthermore, when we conducted the moderation analysis through the PROCESS macro by Hayes (see Table 10), we found that although the model summary was significant (p < .030), the interaction effect was not (p < .786). Moreover, if we look at the R² change of the overall model (.15), we can see that the interaction (reversed manipulation * revised entitlement scale) only explains for .001 of this variances. This minimal variance is probably one of the explanations for why the interaction turned out not significant. In short, hypothesis 3a is not supported as we cannot be sure that moderation exists.

Table 10: The effect of entitlement on the negative relationship between rejection without reconsideration opportunity and candidates' experience of reconsideration opportunity

RECONSIDERATION OPPORTUNITY	COEFFICIENTS (SE)	T	F	R ²	SIG
Model summary			3.22	.15	.030
Reversed manipulation variable	78 (.87)	89			.379
Revised entitlement variable	20 (.22)	88			.385
Test of interaction	.09 (.31)	.27	.07	.001	.786

In *hypothesis 3b*, it was predicted that the positive relationship between being rejected by an AI-assisted recruitment process with the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity will be moderated by the candidate's psychological entitlement, such that the relationship will be weaker if the candidate has high psychological entitlement (moderator).

Taking a look at Table 11, we can see that there is a positive relationship between being rejected with reconsideration opportunity and candidates' experienced reconsideration opportunity. However, just as with hypothesis 3, our findings are non-significant and illustrate that even though we see a minimal trend that high psychological entitlement may affect the candidates' perception of reconsideration opportunity such that it becomes weaker (-.09) it is not significant, and we can therefore not be confident that the moderation exists. Hence, hypothesis 3b is not supported.

Table 11: The effect of entitlement on the positive relationship between rejection with reconsideration opportunity and candidates' experience of reconsideration opportunity

RECONSIDERATION OPPORTUNITY	COEFFICIENTS (SE)	T	F	R ²	SIG
Model summary			3.22	.15	.030
Manipulation variable	.78 (.87)	.89			.379
Revised entitlement variable	11 (.22)	50			.620
Test of interaction	09 (.31)	27	.074	.001	.786

In *hypothesis 3c*, it was predicted that the positive relationship between perceived reconsideration opportunity and a job candidate's intentions to recommend a friend to apply for a position, and their interest to reapply for another position in the future, will be moderated by the candidate's psychological entitlement, such that the relationship will be weaker if the candidate has high psychological entitlement (moderator).

Up until now, we have found no supporting evidence for the moderating effect of entitlement on candidates' experience of reconsideration opportunity. In this section, we will try and test whether entitlement moderates the relationship

between experienced reconsideration opportunity and likelihood to recommend a friend to apply or their intentions to reapply in the future. Reviewing the results presented in Table 12, we can see that although the overall model is significant for both recommend a friend (p < .021) and intention to reapply (p < .007), the interaction effect is not significant at all. Looking at the interaction effect (entitlement * experienced reconsideration opportunity) on recommending a friend it is only .04 with an R^2 of .001 which is almost zero effect. This could explain the significant level of p < .877. Furthermore, looking on the same interaction effect only on the intention to reapply, we can see that it is somewhat larger (.15) with an R^2 of .004 it is still low, and we can argue for an almost null-existent effect which is supported by the significance level of p < .611. Given our hypothesis predicted that entitlement would weaken the effect, we can see that the effect of the interaction on recommending a friend and reapply is positive (stronger). Taking this into consideration, and the non-significant results, hypothesis 3c is not supported.

Table 12: The effect of entitlement on candidates' intention to recommend a friend to apply or reapply in the future.

RECOMMEND A FRIEND	COEFFICIENTS (SE)	T	F	R^2	SIG
Model summary			3.51	.17	.021
Revised reconsideration opportunity	.45 (.76)	.59			.560
Revised entitlement variable	.22 (.87)	.25			.802
Test of interaction	.04 (.27)	.16	.02	.001	.877
INTENTION TO REAPPLY	COEFFICIENTS (SE)	T	F	R^2	SIG
INTENTION TO REAPPLY Model summary	COEFFICIENTS (SE)	T	F 4.47	R ²	.007
	COEFFICIENTS (SE) .27 (.80)	.34			
Model summary					.007

4.8 Procedure, study 2

In study one, we wanted to investigate whether entitlement as a personality trait had a moderating effect on the relationship between the experimental conditions and procedural justice, and the relationship between procedural justice and candidate behavior. As our literature review suggests, entitlement can also be a state, meaning that a situation or context can influence how entitled an individual to perceive

him/her to be. Thus, in our second experiment, we wanted to explore whether entitlement as a state instead of a personality trait moderates the same relationship given above.

Like study one, study two contains two experiments built on the same logic. As the context of the two studies is very similar, we will not retell the same explanation we gave in study one. However, we will instead describe the differences between study one and two. In study sample one, we had quite a diverse group of subjects when it comes to educational background and nationality. In study sample two, our data contained only subjects with a bachelor's degree and Norwegian nationality. The reason for the difference is because Kristiania University College only have Norwegian speaking lectures and thus result in only Norwegian speaking students. We also did not have access to master students at Kristiania University College. Another difference between the two studies is the number of subjects (e.g., 74 in study one, and 55 in study two). As Kristiania University College has smaller classes then BI, we had limited access to the same large number of respondents as we did on BI.

The study itself differ in the way entitlement questions were presented. In study one, we mixed entitlement and personality questions to disguise the measurement of entitlement, and it was presented before the manipulation. However, in study two, we presented the entitlement questions after the manipulation was conducted to see if the manipulation itself had a moderating effect on the subject's perception of being entitled.

4.9 Measurement, study 2

Although study one and study two are equally designed, we removed five of the nine entitlement questions in study two (see Appendix 3). The argument for our choice is that the wording of the questions we removed seemed out of place when presented them after a rejection. Hence, to not risk damaging our dataset by making the subjects question the authenticity of the recruitment process, we removed the questions that were not of a good match. Beside removing some entitlement questions, the structure and questions remain the same between study one and study two.

4.10 Data Analysis and Results, study 2

Just as in study one, we started by exploring our dataset and tested the factor loading on the same scales as in study one, only with an adjusted entitlement scale. The scales had decent factor loadings, but reconsideration opportunity needed to be slightly adjusted as it loaded on several components. After the adjustments, we wanted to explore an acceptable 3-factor structure and to get that we needed to further adjust the scales as several of the questions loaded on several components. After getting an acceptable 3-factor structure, we tested for scale reliability and encountered our first problem with the second dataset. The Cronbach's Alpha on revised reconsideration opportunity scale was far below the minimum threshold of .600 and was deemed unfit as the internal consistency was too low. The Cronbach's Alpha on both revised entitlement and procedural justice scales was above .700, which indicate an excellent internal consistency (see Table 13).

Table 13: Reliability testing of original and revised scales

		RELIABILITY			
VARIABLE	INDEX	ORIGINAL SCALE ^a	REVISED SCALE ^b		
Entitlement	No. of items	4	2		
	Cronbach's Alpha	.303	.749		
Reconsideration Opportunity	No. of items	5	2		
	Cronbach's Alpha	.624	.283		
Procedural Justice	No. of items	7	5		
	Cronbach's Alpha	.848	.826		

Although the revised reconsideration opportunity scale was far to low to be further used, we wanted to explore if our manipulation had worked on the students at HK. We decided to explore the dataset further by conducting a one-way ANOVA and found out quickly that our manipulation had failed (p < .970) as there was no significant variance between treatment conditions and the respondents rating of experienced reconsideration opportunity (See Table 14).

Table 14: Manipulation check of study two

DESCRIPTIVE TABLE		N	MEAN(SD)	SE
Reconsideration Opportunity	Without Reconsideration Opportunity	26	3.08 (.64)	.13
	With Reconsideration Opportunity	24	3.08 (.57)	.11
	Total	50	3.08 (.60)	.09
ONE-WAY ANOVA		DF	F	SIG
Reconsideration Opportunity	Between Groups	1	.001	.970
	Within Groups	48		
	Total	49		
STATISTICAL POWER	PARTIAL ETA SQUARED	OBSERVED POWERa		SIG
Testing for type 2 error	type 2 error .00 .05		.05	.970

Based on the numbers shown in Table 13 and 14 (i.e., low internal consistency, non-significant, weak statistical power), hypothesis 4 will not be measured, analyzed and discussed, and we will discontinue exploring study 2 and deem the experiment as a failure. We have some ideas for why our experiment failed, but that will be discussed in chapter 5.5.

5.0 Discussion

5.1 Does reconsideration opportunity as a feature of an AI-assisted recruitment process facilitate a better candidate experience?

The support for H1 (p < .004) suggests that when being rejected by an AI-assisted recruitment procedure, the job candidates' will experience the process as fair when there is possibility of having the decision evaluated by a human agent as well. On the contrary, when not receiving this opportunity, it will have a reversed effect and make the candidate perceive the procedure as less fair. Our analysis finds that if a candidate is probived with the opportunity to have the rejection decision evaluated by a human agent, their experience of reconsideration opportunity may increase with .58. Contrastingly, when a candidate does not get this possibility, their experienced reconsideration opportunity may decrease by -.58 (see Table 9). We argue that this finding might be of importance to organizations who are considering implementing an AI-assisted recruitment tool. Even though there is considerable research on the possible cost- and time- effective benefits of AI-assisted recruitment tools (Artisan, 2017), our results show that it can affect the candidate experience negatively. Negative candidate experience is always unfortunate for an organization, as it can affect the behavior of the candidate and hurt the employer branding efforts of the hiring organization (Chhabra & Sharma, 2014).

Our findings support Gilliland's (1993) research on reconsideration opportunity as an influencing factor on candidates experience of fairness in recruitment processes. Gilliland argues for ten procedural rules and that each of these can be salient in different situations or contexts. Looking at our results, we can add to his research that reconsideration opportunity is found to be necessary for the candidate's experience of fairness in an AI-assisted recruitment context. Furthermore, earlier research on candidate experience and procedural justice have found that candidates on a general basis prefer to meet and speak to human recruiters rather than a non-interpersonal tool such as AI-assisted recruitment software's (Sears et al., 2013; Bauer et al., 2004). This is supported through our study as we see that candidates experienced reconsideration opportunity increases if they have the opportunity to get their results reviewed or discuss these results with an HR manager.

Our findings on how reconsideration opportunity affects job candidates' perception of fairness support the findings of Arvey and Sackett (1993) who found that a process was experienced as more procedurally fair when having the results rechecked or evaluated. Moreover, Murphy, Thornton, and Reynolds (1990) argue that a procedure is experienced as fairer when the candidate has the opportunity of reconsideration through a second measurement method. In agreement with Murphy and colleagues (1990) statement that a procedure is experienced as fairer when a candidate has the opportunity of reconsideration by two evaluation methods, we found a significant difference between the mean scores of rejections with and without reconsideration opportunity, where candidates experience the recruitment process as more procedurally fair when both AI and human agents are given as evaluation methods.

5.2 Does exposure to rejection with reconsideration opportunity result in a greater experience of reconsideration opportunity, and – in turn, greater intention to recommend a friend to apply or to reapply in the future?

H2 was found only to be partially supported due to inconsistent findings. In Figure 3, we found that the mediated effect of experienced reconsideration opportunity on the intention to recommend a friend was not present (c' = -.43). It was found to be inconsistent mediation because the total effect (-.08) was smaller than the direct

effect (-.43), and the symbols were different (+/-). This inconsistent mediation may be due to a counterproductive effect of our experiments, where our manipulation of the respondents caused an opposing mediation effect (MacKinnon, Fairchild, & Fritz, 2007). As a result of the inconsistent mediation results of intention to recommend a friend to apply, it will not be further discussed.

In Figure 4, we presented a mediated relationship between rejection with reconsideration opportunity and intention to recommend a friend to apply or reapply in the future through experienced reconsideration opportunity When we included the mediation variable we can see that the direct effect (c' = .04) almost reached zero, but there is still some variation explained by other variables. Our findings indicate that when candidates are rejected, but provided with the opportunity to have a human agent evaluate the decision, their experience of reconsideration opportunity increases, which causes an additional increase in their intention to reapply in the future (see Figure 4). These findings are important as it gives implications for organizations that candidates who feel unfairly treated, will experience a lower reconsideration opportunity, and as a result, their intention to apply in the future will be lower. In today's society where the competition is hard, and organizations have to be proactive to keep themselves from being bypassed by competitors, one can assume that the pursuit for talents is more important than ever (Doucette, 2015). By exposing candidates' to a bad experience, which may lead to a lack of interest in turns of reapplying in the future, will most likely result in the organization losing talents. Even though the candidate was not fit for the position rejected from, they might be the perfect fit for another position in the future. Henceforth, it might be a loss for the organization that the candidate does not reapply in the future (2015).

Moreover, our results support the prediction that job applicants' reactions are likely to be affected by the candidate experience of whether the procedures used to come to a hiring decision are fair (Geenen et al., 2012). McCarthy and colleagues (2017) suggest that low perception of fairness in the selection process is likely to generate harmful behavioral intentions against the company. Comparing our results to their statement, it is supported, which means that a low level of experienced reconsideration opportunity will decrease the likelihood that candidates will reapply

in the future. As the perception of a fair recruitment procedure affects the intention to reapply in the future positively, the perception of the recruitment process as unfair will affect the intention to reapply in the future to the same extent, however in a negative manner. Furthermore, the results of H2, where it is argued that candidates' reaction may have important implications for the organization later on is part of the reason for why research on applicant reaction to the recruitment process emerged and is such a hot topic for discussion (Hausknecht, Day & Thomas, 2004; McCarthy et al., 2017).

However, as Figure 4 show, there has not been found a significant direct relationship between having a human agent reconsider the rejection decision and the job candidate's intention to reapply in the future. This finding may indicate that having the opportunity of reconsideration may not affect all candidates' intentional behavior against the company. Both Ryan and Ployhart (2000) and Chan and Smith (2004) question to what extent the experience of the candidate does, in fact, have an effect on the job candidate's behavior, which in one way explains the missing direct relationship found between having the opportunity to get the results reconsidered and their intention to reapply to the organization in the future. On the other side, by measuring the mediated effect, we find that job candidates who experienced the process to be fair through the opportunity of having a human agent evaluate the rejection decision, do have a higher intention of reapplying in the future (see Figure 4). This finding indicates that those who were given reconsideration opportunity, and thus experienced the procedure as more fair because of it, will have a higher intention of reapplying. Furthermore, as this treatment condition is found to have a significant impact on the candidate's experience of fairness (Table 8), we consider this mediated effect of being the most salient, which indicates that organizations who use AI-assisted recruitment processes without giving candidates reconsideration opportunity, may result in candidates with a lower intention to reapply in the future.

5.3 Does psychological entitlement moderate how applicants perceive and react to AI assisted recruitment and selection decisions, or is it an outcome of a procedurally unjust process?

The results of H3a show that our hypothesis is not supported, which means that we did not find a moderating effect of psychological entitlement on the negative relationship between being rejected in an AI-assisted recruitment process without the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity. Table 10 shows how the interaction only explains for .001 of the variances in the model and is not significant p < .786, which indicates that we cannot be sure about the moderating effect of entitlement. We expected that candidates with a high level of psychological entitlement would experience rejection in an AI-assisted recruitment process without the opportunity to have this rejection evaluated as less fair, as individuals high on entitlement feel that their surroundings owe them something (O'Leary-Kelly, Rosen & Hochwarter, 2017). Moreover, when entitled job candidates experience a recruitment situation which is generally considered unfair, we assumed them to have an even stronger experience of unfairness. However, we cannot find any results supporting these assumptions.

The predictions of H3b is found to be not supported. The lack of support for this hypothesis indicates that a candidate's psychological entitlement will not moderate the positive relationship between being rejected by an AI-assisted recruitment process with the opportunity to have this decision evaluated by a human agent and the job candidate's perceptions of reconsideration opportunity. Table 11 shows how the variance of the interaction is only explained by .001 and is not significant p < .786, and it indicates that we cannot be sure about the moderating effect. So even though we see a trend that psychological entitlement weakens the candidate's perception of reconsideration opportunity (-.11) the interaction is so small that we cannot be sure that the moderation exist. We expected that a candidates' high on psychological entitlement would result in a positive relationship between having the opportunity to have the rejection evaluated and the perceived reconsideration opportunity to be weaker. We rationalized this assumption based on how individuals high on psychological entitlement often

experience getting less than they deserve (Byrne, Miller & Pitts, 2009). Also, as individuals are biased to confirm their expectations (Bell, Ryan & Wiechmann, 2004), we assumed that entitled individuals were more likely to find indicators that were true to their expectations of being unfairly treated, which would weaken the positive perception of reconsideration opportunity. Neither here, did we find any evidence that could confirm our assumptions.

H3c is also found to not be supported, as our results show how we cannot prove any moderating effect of psychological entitlement on the positive relationship between perceived reconsideration opportunity and a job candidate's intentions to recommend a friend to apply for a position, and their intention to reapply for another position in the future (see Table 12). Looking at the variance when the interaction effect is added on both intentions to recommend a friend (.001) and intention to reapply (.004), they are both so insignificant that one might almost argue for a null-existent effect. We expected psychological entitlement to affect the positive relationship between perceived reconsideration opportunity and intentions against the organization, as we believed that the factor of entitlement would weaken the candidates experienced reconsideration opportunity in itself. As entitled individuals tend to believe they get less than what they deserve and therefore easier feel unfairly treated (Byrne, Miller & Pitts, 2009), it may result in negative intentional behavior towards the organization (Zitek et al., 2010). We assumed that these outcomes would be visible through their intention to recommend a friend and reapply in the future. However, no such trend was found.

The non-supported findings of H3 a, b, and c may, however, be positive for organizations. One could argue that the non-support for our assumptions indicate that psychological entitlement does not influence a candidate's perceived procedural justice or reconsideration opportunity, nor their intention to reapply in the future. Which further on, may indicate that there is one less factor for organizations to be aware of in recruitment with AI-supported procedure, namely entitlement.

When explaining our findings from H3 a, b, and c it shows how our findings contrast from existing theories as none of our hypothesis related to entitlement was supported. One possible reason for this may be our small sample population. When

the sample population is small, the results are less trustworthy, and scarce individual differences may result in a more noticeable impact on the results, than with a larger population (Zamboni, 2018). Another possible reason for why our assumptions, which was based on earlier theory, was not supported, might be because earlier research has been done in other areas. As we are trying to fill a gap in research, we have few earlier studies done in the exact similar context as ours. For example, it is fair to assume that job candidates will try to hide that they are entitled, as it might not be experienced as a socially desirable trait. In settings where individuals have strong incentives to make a positive impression, as in the context of recruitment, it is found to be a well-known problem that the answers are adjusted in a way the candidate believes to be desirable (Levin & Montag, 1987), which could result in our results being affected if the candidates "faked" how entitled they actually are. Another possible explanation could be that our findings indicate that job candidates do not feel entitled in recruitment settings, in the same way as in other settings. Both of the latter might be plausible explanations for why our results differ from earlier research on the subject.

These speculations open up for interesting topics for future research. It would be interesting to examine if a similar study, with a larger sample, would find different results in a similar experiment and could confirm that it is our small sample that affects our results. Further, it would be exciting if future research found indications for that psychological entitlement do not impact job candidates experience of fairness in a recruitment process, and in that case, why this situation differs from other situations. Alternatively, it might be common for candidates to try to hide the feature of entitlement in a recruitment situation because they believe that it might not be favorable for their outcome in the process.

5.4 Practical implications

In the introduction of this thesis, we elaborated on how AI based recruitment solutions are emerging rapidly in today's society and may outperform human recruiters on several aspects (Kuncel, Klieger & Ones, 2014). Although research has shown several beneficial benefits of including AI into the organization's recruitment solution (i.e., reduce repetitive tasks, cost savings), it is vital to remember the question about candidate experience before deciding to implement

an AI-based recruitment solution. Therefore, the main implication of our study is the importance of having a recruitment process that is considered to be procedurally fair by the candidates. Our findings suggest that by allowing candidates to have an HR manager review their result is one way that organizations can increase the possibility that candidate's perception of procedural fairness will be of such a degree that it will be beneficial.

The rationale behind implying that candidates' perception of procedural justice is essential is based on our findings related to candidates' interest to reapply for another position in the future. We found a significant relationship between the candidate's perception of procedural justice and their interest in applying in the future. This indicate that an organization exposing candidates to a recruitment process that is perceived as unfair, may experience a situation where they lose candidates in the long run as those exposed to the recruitment process will not reapply in the future if given the opportunity. Concequently, if organizations fail to secure a positive candidate experience, it may have reprecussions for the employer brand and recruitment activities in the future.

5.5 Methodological reflections and limitations

When conducting research involving other human beings, there are some precautions that you need to take in order to protect the subjects of the study. In Norway, NSD, short for "Norwegian Centre for Research Data" and their objective is to improve possibilities and working conditions for empirical research that requires data access (NSD). Furthermore, they have strict regulations when it comes to data security, and we have tried to follow all their guidelines even though we did not have to apply for their research approval. Since our study does not collect any empirical data on a personal level that can somewhat link the results and the respondents, we were not required to apply. However, we decided to follow their strict regulations regardless to protect our respondents.

As social science research almost always includes people to some extent, we wanted to set some ethical guidelines to our study. Although we had several ethical guidelines (treat each respondent with respect, protect their anonymity, present the data in its pure form), we also experienced some ethical challenges. One challenge we experienced was the need to conceal the real purpose of our study for

the respondents. The reason behind our choice to conceal the purpose was to make sure the reliability of the study was not impaired if the respondents knew what they were being tested on, which could possibily result in a change in behavior (Jacobsen, 2015). The respondents of our study were manipulated into thinking that they were participating in a random study not related to our core area of research. This concealment may to some extent be justified, but it also raises some ethical concerns as a central element in the ethical conduct of research is the attainment of informed consent from the respondents (Tinker & Coomber, 2004). The principle of informed consent obliges that all our respondents received accessible and full information before they would decide to participate in our study or not. As we could not reveal our experimental condition and our specific intent with the data, we acknowledge that we were to some extent working in an ethical grey zone.

Another aspect of consideration is our choice of experimental research design. We wanted to create an experience of a recruitment process as close to reality as possible, given a controlled environment (classroom). In doing so, we noticed a few topics for discussion as it may have been a limitation for our study. First off, our respondents were encouraged to apply for a position in a company they have never heard anything about before. It is fair to assume that our respondent's motivation to apply and express an honest representation of themselves is lower than it would have been if it was themselves that decided to apply.

Furthermore, the position itself may to some extent have not appealed to the respondents, although we tried to our best capacity to make it sound exciting and relevant, we cannot uphold every respondents' individual preferences. In short, given the assumed lower motivation for the position, we can only assume that it could have impacted our data and our manipulation. As a consequence of the assumed effect, it may be that the ecological validity of the study has been impacted, as the setting may not have been in accordance to a real-life scenario (Bryman & Bell, 2015, p. 51).

Another topic for discussion is the use of LinkedIn profiles in our study as we had several questions from respondents about the use of LinkedIn profiles during the experiment. The questions were regarding the fairness of including

LinkedIn profiles that were underdeveloped versus profiles that had been developed through time. We got the impression that respondents without a LinkedIn profile or with an undeveloped profile page considered it as a disadvantage and unfair. We consider this as a limitation, as it may have impacted our results to some extent, given that the candidate's perception of fairness could already here have been affected, and not only by our manipulation conditions. As we had enforced strict regulation rules of anonymity and protection of our respondents, we had no way to track and regulate if this assumed limitation affected our study.

Combined in both study one and study two, we had a total of 129 respondents, which can be considered a small sample size. Although we do not suspect our sample size to have impacted our findings, we assume that if we had a larger sample size, we could have been able to be more confident that our findings and the statistical power of our models would have been statistically stronger. Thus, a larger sample size would have increased the quality of our study and could perhaps have impacted in either a positive or negative way.

A limitation we would like to emphasize is the lack of translation of the questionnaire for study two. Given the weak statistical power and the non-significant levels of study two, we assume that because the students struggled to understand what the questions meant and therefore decided to select the neutral option on our Likert-scales (3). The minimal difference between the mean scores in study two support this assumption. According to Kahneman (2011), surveying the participants in their mother tongue may increase the reliability of the results. Accordingly, we find it possible that this may be one of the significant reasons why the manipulation did not work in our second study, hence rendering it useless for further exploration.

5.6 Suggestion for future research

For future research, it could be interesting to conduct similar studies but incorporate the factor of gender to the primary model. When exploring our data, we discovered findings which were independent of our hypothesis but caught our attention. We saw trends which indicate that the experienced reconsideration opportunity differentiated between males and females. Through our different models, we recorded a recurring trend where females on a general level had higher

reconsideration opportunity scores than males. Sweeney and McFarlin (1997) suggest that there are differences based on gender in the assessment of justice. Their study argues for a significant difference between males and females in their perception off fair procedures and outcomes. They find that female candidates value organizational outcome through procedural justice more than males, while males value organizational outcomes through distributive justice more than females. In simpler terms, procedural justice plays a more significant role when females evaluate organizational activities than when males do (1997). It would be of interest to see how these findings unfold in a setting of a recruitment process based on AIassisted procedures. Also, whether the tendencies of gender differences argued for by Sweeny and Mcfarlin (1997), would be evident in an AI-assisted recruitment setting. So if the trend we found is still evident, what would that mean for the organizations who use such tools? What implications would that indicate for them? We argue that these questions are relevant for organizations to consider in a world where development in the field of gender equality in business and industry is as relevant and essential as technological development (United Nations sustainable development Goals, nr.5 Gender Equality). Therefore, we consider this to be relevant and important to explore further, and we will recommend this approach for future research.

Other exciting areas to explore further is the relationship between perceived procedural justice and intention to recommend a friend and reapply in the future, given a real recruitment situation. This is basically because we suspect that candidates measured in a real recruitment situation will have higher motivation and be more responsive to the same manipulation we used in our study. We believe that being rejected without reconsideration opportunity when the motivation for the position is high, would have a more significant impact on the candidate's perception of procedural fairness. Other arguments for why the experiments should be conducted in a real recruitment setting, is the heightened chance of ecological validity and the higher chance for honest and sincere replies from the respondents (Bryman & Bell, 2015).

Another area of future research we believe to be interesting is the impact of personality traits on the perception of procedural justice and if a specific type of

personality will struggle more to be accepted by an AI controlled recruitment solution than others. Often in a recruitment setting, you want to recruit candidates that seem emotional stable and reject those with unstable or a high score on the neuroticism trait as they typically are moody and have a higher likelihood to express anxious behavior (Whitbourne, 2010). Given this assumption, one can argue that an AI-based recruitment solution would reject emotionally unstable applicants resulting in a setting where the organization rejects those with a tendency to experience the process as unfair and thus not recommend the company further to friends and family.

6.0 Conclusion

To summarize our research, this paper has explored and elaborated on the relationship between rejection by AI-assisted recruitment procedures, and the candidate experience of procedural justice, through the factor of reconsideration opportunity. We explored how the opportunity to have a human agent evaluate the rejection affected candidates' experienced reconsideration opportunity, and how this relationship further affected candidates' intention to recommend a friend and reapply in the future. We also explored whether candidates' level of psychological entitlement played a role in this relationship, both if it had any effect on the possibility to have a human agent evaluate the rejection and the perception of reconsideration opportunity, and on the experienced reconsideration opportunity and intention to recommend a friend and reapply in the future. We found that the opportunity to have a human agent evaluate the rejection from AI-assisted recruitment processes did affect the candidate's experience of reconsideration opportunity, and how this experience acted as a mediator between being rejected with reconsideration opportunity and their intention to reapply in the future. However, the concept of psychological entitlement was not found to affect the candidates' experience of the recruitment process nor their intention to recommend a friend or reapply in the future. Our findings have a relevant contribution to the research field of recruitment and selection, and in particular to the impact of AI in recruitment processes. Our findings indicate the importance of maintaining a positive candidate experience, and how the economic advantages should not be the only aspect to be considered when thinking about implementing AI in an organization but also the long-term effect of negative candidate experience.

7.0 References

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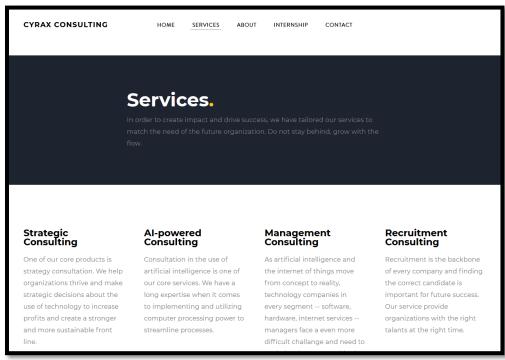
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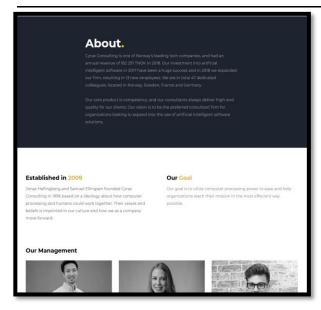
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Appendix 1: The Company Webpage

The fictive company website that we built has been removed and terminated as the purpose of the webpage has been fulfilled. However, we have added some screenshots of how the website looked for reference.











Appendix 2: Questionnaire for study 1

Big Five personality trait questions

Extroversion 1: I see myself as someone who...Is talkative

Extroversion 2(r): I see myself as someone who...Tends to be quiet

Extroversion 3: I see myself as someone who...Is outgoing, sociable

Extroversion 4(r): I see myself as someone who...Is sometimes shy, inhibited

Agreeableness 1(r): I see myself as someone who...Is reserved

Agreeableness 2: I see myself as someone who...Is helpful and unselfish with others

Agreeableness 3(r): I see myself as someone who...Is sometimes rude to others

Agreeableness 4: I see myself as someone who...Is considerate and kind to almost everyone

Conscientiousness 1: I see myself as someone who...Does a thorough job

Conscientiousness 2r: I see myself as someone who...Tends to be disorganized

Conscientiousness 3: I see myself as someone who...Makes plans and follows through with them

Conscientiousness 4r: I see myself as someone who...Can be somewhat careless

Emotional stability 1(r): I see myself as someone who... Is depressed, blue

Emotional stability 2: I see myself as someone who... Is relaxed, handles stress well

Emotional stability 3(r): I see myself as someone who... Worries a lot

Emotional stability 4(r): I see myself as someone who... Gets nervous easily

Openness 1: I see myself as someone who... Is original, comes up with new ideas

Openness 2: I see myself as someone who... Has an active imagination

Openness 3: I see myself as someone who... Likes to reflect, play with ideas

Openness 4(r): I see myself as someone who... Has few artistic interests

Entitlement

Entitlement 1: I see myself as someone who...Honestly feels more deserving than others

Entitlement 2: I see myself as someone who... Believes that great things should come to me

Entitlement 3: I see myself as someone who...Would deserve to be on the first lifeboat if I were on a sinking ship

 $Entitlement\ 4(r): I\ see\ myself\ as\ someone\ who... Do\ not\ necessarily\ deserve\ special\ treatment$

Entitlement 5: I see myself as someone who...Demands the best because I'm worth it

Entitlement 6: I see myself as someone who...Deserves more things in my life

Entitlement 7: I see myself as someone who... Believes people like me deserve an extra break now and then

Entitlement 8: I see myself as someone who... Believes things should go my way

Entitlement 9: I see myself as someone who... Feels entitled to more of everything

Procedural Justice

Procedural Justice 1: I feel...That I was given sufficient opportunity to have my test results rechecked, if necessary.

Procedural Justice 2: I feel... Satisfied with the process of communicating my test results.

Procedural Justice 3: I feel... Satisfied with the chance to discuss my test results with someone.

Procedural Justice 4: I feel... Satisfied with the process for reviewing my test results.

Procedural Justice 5: I feel... That the opportunities for reviewing my test results were adequate.

Procedural Justice 6: I feel...That I have been able to express my views and feelings during the recruitment process.

Procedural Justice 7: I feel...That I had influence over the outcome arrived at by the recruitments software.

Procedural Justice 8: I feel...That the recruitment process have been consistent.

Procedural Justice 9: I feel...That the recruitment process have been free of bias.

Procedural Justice 10: I feel...That the process have been based on accurate information.

Procedural Justice 11: I feel...That I have been able to appeal the outcome arrived at by the recruitment software.

Procedural Justice 12: I feel...That the recruitment process upheld ethical and moral standards.

Behavior

Behavior 1: How likely is it that you... Would recommend a friend to apply?

Behavior 2: How likely is it that you... Would reapply to another position in the company?

Behavior 4: Please indicate if you want your comment to be anonymously published on:

a) Our Facebook page b) Glassdoor (company review site) c) Do not want to publish my comment

Appendix 3: Questionnaire for study 2

Big Five personality trait questions

Extroversion 1: I see myself as someone who...Is talkative

Extroversion 2(r): I see myself as someone who...Tends to be quiet

Extroversion 3: I see myself as someone who...Is outgoing, sociable

Extroversion 4(r): I see myself as someone who...Is sometimes shy, inhibited

Agreeableness 1(r): I see myself as someone who...Is reserved

Agreeableness 2: I see myself as someone who...Is helpful and unselfish with others

Agreeableness 3(r): I see myself as someone who...Is sometimes rude to others

Agreeableness 4: I see myself as someone who...Is considerate and kind to almost everyone

Conscientiousness 1: I see myself as someone who...Does a thorough job

Conscientiousness 2r: I see myself as someone who...Tends to be disorganized

Conscientiousness 3: I see myself as someone who...Makes plans and follows through with them

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Behavior

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Behavior 2: How likely is it that you... Would reapply to another position in the company?

Behavior 4: Please indicate if you want your comment to be anonymously published on:

b) Our Facebook page b) Glassdoor (company review site) c) Do not want to publish my comment