Information as a double-edged sword: The role of computer experience and information on applicant reactions towards novel technologies for personnel selection

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ABSTRACT

Technologically advanced selection procedures are entering the market at exponential rates. The current study tested two previously held assumptions: (a) providing applicants with procedural information (i.e., making the procedure more transparent and justifying the use of this procedure) on novel technologies for personnel selection would positively impact applicant reactions, and (b) technologically advanced procedures might differentially affect applicants with different levels of computer experience. In a 2 (computer science students, other students) × 2 (low information, high information) design, 120 participants watched a video showing a technologically advanced selection procedure (i.e., an interview with a virtual character responding and adapting to applicants' nonverbal behavior). Results showed that computer experience did not affect applicant reactions. Information had a positive indirect effect on overall organizational attractiveness via open treatment and information known. This positive indirect effect was counterbalanced by a direct negative effect of information on overall organizational attractiveness. This study suggests that computer experience does not affect applicant reactions to novel technologies for personnel selection, and that organizations should be cautious about providing applicants with information when using technologically advanced procedures as information can be a double-edged sword.

Keywords: Information; computer experience; personnel selection; applicant reactions; human-computer-interaction

1 Introduction

The use of technology has become more and more common as people are constantly being exposed to novel technologies and unfamiliar technologically-enhanced situations. It comes as no surprise that the area of personnel selection is no exception. With the objective of screening the best possible applicants, applicants might soon undergo employment interviews with virtual characters (Langer, König, Gebhard, & André, 2016). Compared to more classical technology-mediated selection interview procedures like videoconference interviews, these novel technologies would lack any interpersonal interaction in the interview. However, former research implies that applicant reactions (i.e., how do applicants react to a personnel selection situation) can be detrimentally affected by novel technologies (e.g., Blacksmith, Willford, & Behrend, 2016). Consequentially, some applicants might self-select out of the application process if they experience distinct negative feelings towards technologically-advanced selection procedures (cf., Uggerslev, Fassina, & Kraichy, 2012). In particular, less computer-experienced applicants might be more prone to negative reactions towards novel technologies for personnel selection (e.g., Bauer et al., 2006).

According to previous research, negative applicant reactions can be mitigated by providing information (Lahuis, Perreault, & Ferguson, 2003; McCarthy et al., 2017; Truxillo, Bodner, Bertolino, Bauer, & Yonce, 2009). Information provided could include diverse topics, but applicants are generally given information focused on uncertainty reduction, guarantees of respectful treatment, increasing transparency, and pronouncing job validity of the selection procedure (McCarthy et al., 2017; Truxillo et al., 2009).

The first goal of this study was therefore to examine the relationship between computer experience and applicant reactions to novel technologies for personnel selection. The second goal was to test if procedural information (i.e., information about what is

happening during the procedure and justifying the use of this procedure) improves applicant reactions in the context of novel technologies for personnel selection.

The section background and hypotheses development is structured as follows: We start by introducing the evolution of the use of technology in personnel selection and by providing an overview of research about the relation of technology and applicant reactions. Following, we describe the importance of the variables computer experience and information and their interplay in the context of novel technologies for personnel selection. We then develop hypotheses regarding applicant reaction variables (i.e. job relatedness, information known, open treatment, transparency, consistency, interpersonal treatment, opportunity to perform, fairness, creepiness and privacy concerns) that are likely affected by our independent variables and propose that these variables will mediate the relationship of computer experience and information on organizational attractiveness.

2 Background and Hypotheses Development

2.1 Technology in personnel selection

The most extensively studied area of technology in personnel selection are technologically-mediated forms of the employment interview. For instance, Bauer, Truxillo, Paronto, Campion and Weekley (2004) used interactive voice response technologies such that applicants called a hotline and answered automatically administered questions by pressing the keypad. Other studies have used telephone and videoconference interviews and investigated their effects on the interview and on applicants (Chapman, Uggerslev, & Webster, 2003; Sears, Zhang, Wiesner, Hackett, & Yuan, 2013).

Recent research has shown that technology offers more sophisticated possibilities for personnel selection processes. For example, instead of pressing the keypad of a telephone, applicants in so-called digital interviews record themselves answering interview questions using their webcam and submit these videos to the hiring organization (Brenner, Ortner, &

Fay, 2016). There is even more to come as enhancements in machine learning and sensor technologies (e.g., cameras) allow automated recognition, analysis, and interpretation of social behavior (Schmid Mast, Gatica-Perez, Frauendorfer, Nguyen, & Choudhury, 2015). For instance, a study by Schmid Mast, Frauendorfer, Gatica-Perez, Choudhury, and Odobez (2017) showed that novel technologies can be used to automatically recognize nonverbal behavior (e.g., voice pitch) and to predict job performance for a sales job. This suggests that a virtual interviewer combined with sensing technologies could be used to automatically interview and screen applicants.

It is important to note that some of the discussed technological possibilities are already being used in personnel selection procedures. The biggest companies offering automatic interview solutions are HireVue (HireVue, 2017) in the American market and Precire (Precire, 2017) in the German market. Although there is no company offering interviews with a virtual interviewer, the use of virtual interviewers is one small step in comparison to the aforementioned job interview solutions (cf., Langer et al., 2016)

These technologies are attractive for organizations because of their efficiency and flexibility (no need for interview scheduling). They could also potentially reduce the impact of bias, and provide more analytical possibilities during the automatic evaluation (e.g., dedicated focus on many aspects of nonverbal behavior and verbal behavior) (cf., Chamorro-Premuzic, Winsborough, Sherman, & Hogan, 2016). However, there is only scarce research showing how applicants react to such procedures.

2.2 Applicant reactions towards technology in personnel selection

Applicant reaction research has generated much research over the last decades (Anderson, Salgado, & Hülsheger, 2010). Two theories (by Gilliland, 1993, and Schuler, 1993) are particularly relevant to understand the aspects that impact applicant reactions to selection procedures. First, Gilliland (1993) presents three distributive justice rules

(describing the fairness of selection outcomes, e.g., equality), and ten procedural justice rules (covering the fairness of selection processes, e.g., job relatedness, selection information, honesty) that relate to the overall fairness of selection results and processes. Gilliland (1993) states that these factors should impact important organizational outcomes like organizational attractiveness. Second, in his social validity approach, Schuler (1993) assumes that information about a selection procedure, transparency of the procedure, and applicants' perceived controllability of a procedure are especially impactful in forming positive applicant reactions.

These models are similar in that they point to the importance of fairness and justice in selection processes (Stone, Lukaszewski, Stone-Romero, & Johnson, 2013). If applicants react negatively to selection procedures, then fairness perceptions (Bauer et al., 2001; Gilliland, 1993) and organizational outcomes (e.g., organizational attractiveness, job performance) are likely to suffer (Highhouse, Lievens, & Sinar, 2003; Truxillo & Bauer, 2011). These theories also present key factors with which organizations can improve fairness of selection procedures (e.g., providing information, increasing transparency, showing job validity). Therefore, they might be especially helpful to overcome the extensively debated negative effects of technology on applicant reactions (Blacksmith et al., 2016).

Studies on perceptions of technology in personnel selection and job interviews emerged in the early 2000's when face-to-face interviews were compared to telephone interviews and videoconference interviews (Bauer et al., 2004; Chapman et al., 2003), and this research was recently meta-analytically summarized (Blacksmith et al., 2016). According to this meta-analysis, applicants react more favorably toward face-to-face interviews rather than toward technology-mediated job interviews (Blacksmith et al., 2016).

It is difficult to determine if more advanced technology (compared to technology-mediated interviews) evokes similar detrimental effects on applicant reactions since research

on applicant reactions has not yet caught up to the recent technological developments (Blacksmith et al., 2016). However, if applicants are unfamiliar with a technology, they might have trouble using it or may not understand how or why it is used for personnel selection (Blacksmith et al., 2016; Stone et al., 2013; Wiechmann & Ryan, 2003). Therefore it is conceivable that more advanced technology could also elicit more negative reactions towards the selection situation.

2.3 Computer experience and applicant reactions

In contrast, the use of technology in selection might be more strategic for jobs that require computer skill. Previous research proposed that technology in personnel selection can attract people with high computer experience (Bauer et al., 2006; Stone, Deadrick, Lukaszewski, & Johnson, 2015; Wiechmann & Ryan, 2003). In fact, people with distinct computer experience (e.g., computer science students) are less anxious when interacting with computers (Beckers & Schmidt, 2003; Potosky & Bobko, 1998). Although most people use technology and have computers at home or at work, being exposed to technology and computers does not automatically imply that people understand how these technologies work, potentially leading to negative reactions towards the technology (Tene & Polonetsky, 2015).

On average, computer science students should possess more pronounced technological skills and computer experience. These students enter into this field of study because they are interested in computer technology (Beaubouef & Mason, 2005). Throughout their studies, they learn how to code, how websites and databases work, and how to apply sensor devices. Moreover, computer science students are provided with up-to-date information on novel developments and opportunities for applying their knowledge to various real-world problems (Werner, Hanks, & McDowell, 2004).

In the field of applicant reactions, Wiechmann and Ryan (2003) showed that computer experience is related to more positive perceptions of a computerized selection test, and Bauer

and colleagues (2006) found that people with high computer experience had more favorable reactions to the selecting organizations. People with computer experience may be more adept at computer and technology-mediated selection scenarios and thus react more positively (Wiechmann & Ryan, 2003), but technologically advanced selection scenarios could also be more transparent for computer-experienced people than for people with low computer experience (cf., Tene & Polonetsky, 2015).

2.4 Information and perceptions towards the selection procedure

Information and transparency of the selection process are central points in the selection justice model by Gilliland (1993), and in the social validity approach by Schuler (1993). Indeed, information seems to be a useful way of enhancing applicant reactions: In their meta-analysis, Truxillo and colleagues (2009) found that the provision of information had a positive effect on applicant reactions towards the selection procedure and the organization. In addition, researchers have suggested that organizations should be influencing applicant reactions in the early stages of the selection process because early information about the organization and its selection procedures would help to prevent negative reactions, and instead evoke positive ones (McCarthy et al., 2017).

It is understandable that information is commonly used because (a) it is very easy to generate and to apply during selection procedures, (b) it can focus on a variety of the fairness rules in Gilliland's (1993) model and on transparency in Schuler's (1993) model, and (c) it improves applicant reactions (McCarthy et al., 2017; Truxillo et al., 2009). Therefore, providing information on technologically advanced personnel selection procedures may improve perceptions towards it, thus buffering potential negative applicant reactions (cf., McCarthy et al., 2017). For instance, applicants' feelings of controllability of the situation may increase as they would comprehend to a greater extent what is happening during the selection situation (cf., Truxillo et al., 2009). Additionally, applicants will feel more informed

and the selection procedure will become more transparent (McCarthy et al., 2017). Furthermore, with adequate information, applicants might understand why exactly this selection procedure was used, and concerns over the appropriateness of the selection procedure might be reduced.

2.5 Information × computer experience

Combining assumptions of former research on computer experience and information in the context of personnel selection leads to the idea that information on advanced technology in personnel selection could differentially affect people with different level of computer experience (Bauer et al., 2006). Describing what is happening during a novel personnel selection procedure might be trivial for computer science students as they would already be familiar with the techniques behind such procedures (e.g., that it is possible to automatically recognize nonverbal behaviour such as smiling and nodding). For non-computer science students, every piece of information might be useful to enhance the transparency of the selection procedure. Following the assumptions of Gilliland (1993) and Schuler (1993), a result of this could be that providing information is especially beneficial for applicants with less computer experience.

2.6 Variables potentially affected by computer experience and information

The current study answers calls for research to modernize the field of research on technology for personnel selection (e.g., Blacksmith et al., 2016; Stone & Deadrick, 2015). It is the first study to examine the influence of information on novel technologies for personnel selection. Therefore, we investigate a broad range of variables related to applicant reactions that may be affected by computer experience and the level of information.

Based on the importance of procedural justice and social validity for personnel selection (Gilliland, 1993; Schuler, 1993), we examine procedural justice of the selection procedure. Specifically, we will measure perceived job relatedness, information known, open

treatment, transparency, consistency of the selection procedure, interpersonal treatment, opportunity to perform, and general fairness perceptions (Bauer et al., 2001). These variables are of crucial importance because they are incorporated in the applicant reaction models by Gilliland (1993) and Schuler (1993), reflect a wide range of applicant reactions (Bauer et al., 2001), are related to organizational attractiveness (Highhouse et al., 2003; Uggerslev et al., 2012), and are most likely influenced by computer experience and the level of information.

First, participants provided with the information that the procedure is job related (i.e., it can validly predict applicants' future job performance) will be more likely to perceive the situation as more job related. In the case of computer science students, they might already know that novel technologies can detect nonverbal and verbal behavior and that they can be useful to automatically predict job performance.

Second, provision of information will likely increase information known (i.e., the feeling of being informed about the procedure), open treatment (i.e., the feeling of being treated honestly), and transparency (i.e., perceiving that the procedure is transparent) of a selection process (e.g., Gilliland, 1993; McCarthy et al., 2017; Schuler, 1993; Truxillo et al., 2009). For computer science students, the impact of information on these variables will be less pronounced because they might already perceive the selection procedure as more transparent than non-computer science students.

Third, computer science students and applicants provided with information might perceive the selection procedure as being more consistent (i.e., no differences in the procedure's administration for different applicants) and therefore more objective because they have an idea about what the selection procedure is able to do (Bauer et al., 2006; Wiechmann & Ryan, 2003). In the case of non-computer science students and low information, however, applicants might speculate about what is happening during the

selection procedure, potentially leading to wrong conclusions about how the procedure is administered and thoughts of lower consistency of the procedure (cf., Bauer et al., 2006).

Fourth, perceived interpersonal treatment (i.e., applicants' feeling of being treated with warmth and respect) could be higher for applicants provided with information because being provided with information signals more respect from the selecting organization (Truxillo et al., 2009). The relation between computer science students and interpersonal treatment is more speculative. It is possible that computer science students could feel they are treated with more respect because they might be more used to interacting with novel technologies such as virtual agents as interviewers compared to non-computer science students.

Fifth, applicants' perception of opportunity to perform (i.e., applicants' belief that the procedure allowed them showing their abilities) during the selection procedure is likely higher for computer science students and for informed applicants as both groups might understand to a greater extent that the technologically advanced selection procedure offers applicants enough opportunity to show their skills (cf., Truxillo et al., 2009). More opportunity to perform might also positively impact applicants' control perceptions (cf., Bauer et al., 2001). In contrast, non-computer science students and uninformed applicants might question their ability to showcase their abilities during such a novel selection procedure and consequently be doubtful as whether they are able to control the situation.

Sixth, applicants' justice expectations might include being informed about the selection situation (Ployhart & Ryan, 1998). Therefore providing applicants with information likely generates higher feelings of fairness. For computer science students, higher fairness perceptions might be triggered by the general feeling of knowing what is going on during a technologically advanced selection process (cf., Beaubouef & Mason, 2005; Beckers & Schmidt, 2003).

It is important to consider that procedural justice perceptions are just one component that forms applicant reactions to novel technologies for personnel selection. It is equally important to capture affective reactions toward the selection procedure. Accordingly, we apply the concept of creepiness (Langer et al., 2017; McAndrew & Koehnke, 2016; Mori, 1970; Mori, MacDorman, & Kageki, 2012; Tene & Polonetsky, 2015) to a technologically advanced selection process. Creepiness can be defined as potentially negative emotional impressions paired with feelings of ambiguity towards a person or a situation (Langer & König, 2017). Novel technologies can also evoke creepiness especially if they are not transparent and if they are perceived to be uncontrollable (cf., Tene & Polonetsky, 2015). In our study, participants experience a job interview with a virtual character, and their nonverbal and paraverbal behavior is evaluated automatically. In this situation, novel technologies are applied to a common situation (i.e., a job interview), and following assumptions of previous studies, this combination likely induces feelings of creepiness (Mori, 1970; Mori et al., 2012; Tene & Polonetsky, 2015). However, providing information can lead to less uncertainty (cf., Truxillo et al., 2009), potentially leading to less creepiness. The argument is similar for computer science students, because they already possess knowledge about the technologies used during the selection procedure (Beaubouef & Mason, 2005), and they thus likely report less creepiness.

Lastly, in selection procedures in which applicants are exposed to novel technologies, it is possible that they cannot control which kind of private information is gathered and that they are concerned about what is happening to their private data – a phenomenon that is known as privacy concerns (Malhotra, Kim, & Agarwal, 2004; Shin, 2010). Importantly, privacy concerns can lead to lower perceived organizational attractiveness and are therefore a facet of applicant reactions that needs to be addressed when exploring novel technologies (Bauer et al., 2006). Providing applicants with information about the selection procedure

could help to mitigate privacy concerns, because when selection procedures are more transparent, issues around privacy are reduced (Stone-Romero, Stone, & Hyatt, 2003). In the case of computer science students, they could be less concerned about their private data as they might be more privy to what data the procedure can collect and what can be inferred by these data (Beaubouef & Mason, 2005; Cooper, Dann, & Pausch, 2003).

To summarize, computer science students and applicants provided with more information should be able to see through the selection procedure (expressed in more information known, open treatment, and transparency) and they should have higher feelings of controllability (implicitly covered by the opportunity to perform, feelings of creepiness, and privacy concerns). Additionally, the information may alter applicant reactions such that computer science students and applicants provided with more information might hold more favorable assumptions about perceived job relatedness, consistency, interpersonal treatment, and fairness. Moreover, we expect the influences of information on the aforementioned variables are more pronounced for non-computer science students.

Hypothesis 1: Compared to non-computer science students, computer science students will show more favorable perceptions of a technologically advanced personnel selection method as assessed by increased perceptions of job relatedness, information known, open treatment, transparency, consistency, interpersonal treatment, opportunities to perform, fairness, and reduced levels of creepiness and privacy concerns.

Hypothesis 2: Participants who are provided with more detailed information will show more favorable perceptions of a technologically advanced personnel selection method as assessed by increased perceptions of job relatedness, open treatment, transparency, consistency, interpersonal treatment, opportunities to perform, fairness, and reduced levels of creepiness and privacy concerns.

Hypothesis 3: There will be an interaction between the level of information and participants' field of study on perceptions towards a technologically advanced personnel selection method such that the effects of information on perceptions of a technologically advanced selection situation will be less pronounced for computer science students.

2.7 Effects on overall organizational attractiveness[1]

Overall organizational attractiveness is an important outcome of applicant reactions to a selection method (Gilliland, 1993; Highhouse et al., 2003). Overall organizational attractiveness encompasses the four facets general attraction towards an organization, application intentions (e.g., intention to accept a job offer), recommendation intentions (i.e., recommend the organization to peers), and prestige evaluations of the organization (Highhouse et al., 2003; Warszta, 2012). Previous research proposes that whenever applicants take part in a selection procedure they form perceptions about the organizations through their perception of the selection procedure (Rynes, Bretz, & Gerhart, 1991). Thus, if applicants react positively towards a selection procedure they also generate positive attitudes towards the organization (Bauer et al., 2006).

As shown before, we expect a positive relation between studying computer science and perceptions towards technologically advanced selection methods as well as a positive relation between information and perceptions towards technologically advanced selection methods. Accordingly, these more favorable perceptions could also evoke better evaluations of the organizations' overall attractiveness.

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[1] This study was pre-registered (Open Science Collaboration, 2015), and there we included a mediation model where computer experience should have mediated the relation between the field of study and the perceptions of technologically advanced selection methods; after the experiment we realized that computer experience is rather a manipulation check than a mediator.

Hypothesis 4: The effects proposed in Hypothesis 1 will mediate the positive relation between studying computer science and overall organizational attractiveness.

Hypothesis 5: The effects proposed in Hypothesis 2 will mediate the positive relation between information and overall organizational attractiveness.

Method

3.1 Overview

We used a 2 × 2 (computer science vs. non-computer science students; information vs. low information) study design to test our hypotheses. After immersing into an application situation, participants received information corresponding to their information condition and then watched a video where an applicant was interviewed by a virtual character.

3.2 Sample

G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) was used to predict the required sample size to detect an interaction effect in a MANOVA. For a moderate effect size of Willk's $\lambda = .92$ and a power of $1\text{-}\beta = .80$, a sample of $N = 124$ is necessary. Students in the computer science group were recruited from computer science, bioinformatics, business informatics, and media informatics courses as well as via social network platforms. Non-computer science students were recruited from psychology, economics, education courses, and via social network platforms.

Because of common problems with online studies (e.g., participants taking pauses during the experiment, technical difficulties) we continued to collect data until our sample consisted of $N = 136$ participants. We excluded 13 participants who did not watch the video for the entire duration and three more participants who paused the experiment for more than one hour between the situation description and the questionnaire. The final sample consisted of $N = 120$ German participants. Fifty-seven participants (28% female) with a mean age of 24.23 years ($SD = 3.39$) and a mean study experience of 5.51 semesters ($SD = 4.17$) were assigned to the computer science group because they studied computer science or related fields of study (bioinformatics, computational linguistics, visual computing, computer science for media, business informatics). Of the 63 participants (76% female) in the non-computer science group with a mean age of 23.19 years ($SD = 4.46$) and a mean study experience of

3.86 semesters (*SD* = 3.22), 41% of participants studied psychology, 13% studied economics and 46% came from other fields of study (e.g., chemistry, language, law, pharmaceutics, philosophy, literature). Participants received either course credit or a small amount of money which could be donated to welfare organizations.

3.3 Procedure and information manipulation

Participants received a link that provided them access to the experiment. At the beginning of the experiment, participants were asked to specify their field of study. Afterwards, they were randomly assigned to either the information or low information condition. Participants were then introduced into the context with the following information:

You applied for a job. Your application seems to be well received by the company, because you receive the following letter: "Thank you for your application. Your qualifications, which we gathered from your resume and cover letter, are well suited for the position. As such, we would like to invite you to interview for the position…"

Participants were then immersed into an application situation. They were told that they had to think about common interview questions and they should take time to think about how to present themselves, about where they see themselves in five years, and about their strengths and weaknesses. Following, participants received further information depending on which group they were assigned to (see Table 1).

Table 1.

Information Presented to the Participants in the Different Information Conditions

Condition	Information
Low information	The company wrote: … To offer you the opportunity to introduce yourself, we would like to invite you to an online interview. This will be the next stage of the selection process. The online interview will be conducted by a virtual character.
High Information	*(In addition to the information from the low information group)* The program can …analyze your facial expressions by recognizing eye-movement, eye-contact and facial movement (e.g. smiling). Through eye-contact and facial expressions the computer tries to recognize if an applicant is nervous. If this applies, the computer tries to calm the applicant by treating the applicant positively. …analyze your gestures by recognizing hand, body, and head movement (e.g., nodding and crossing arms). …analyze your speech and voice for example pitch, volume, speech pauses because such signals can be used to infer personality traits like extraversion and openness. This can be useful to assess job fit of the candidate. …interpret your behavior as social and emotional signals for example nodding can be understood as approval; through this the computer can recognize when candidates have finished their answer and it can generate appropriate follow-up questions. …adapt to your individual behavior and try to react adequately to your behavior. If you use many gestures the character will also use more gestures, thus mirroring your behavior, just like real humans would do. …express human communication aspects through the virtual character, by letting the character smile, cross arms, nod… because in several studies it was shown that a virtual character with human communication aspects is perceived more likable than a “cold” computer character.

Note. Information translated from German.

Afterwards, all participants watched a video where a female virtual character was shown interacting with a female applicant (see Figure 1).

Figure 1. Screenshot of the video presented to the participants. The female virtual interviewer was in the center of the screenshot, on the right side there were lights to provide feedback on applicant's nonverbal behavior, on the left side there was the applicant's skeleton, and below there was a continuous smile analysis.

The female applicant was present only through voice and through a body analysis skeleton on the left side of the screen. During the interaction, the interviewer asked the applicant two questions and responded to answers given by the applicant. To ensure participants perceived the capabilities the interview program offers (e.g., sensing of nonverbal signals and emotions), the applicant displayed signs of nervousness in the second question and was thus unable to respond to the question. The interviewer then said it recognized some nervousness. The interviewer emphasized that nervousness was completely understandable and acted in very friendly manner to calm the applicant. The applicant

recovered and was then able to answer the question. Participants were not given any information on the outcome of the interview.

In the end, participants completed a questionnaire containing all measures.

3.4 Measures

3.4.1 Dependent and mediator variables

The items used for this study are presented in Appendix A. All scales were measured with items that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), except for privacy concerns and creepiness which were measured on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Items for **job relatedness, information known, consistency, open treatment, interpersonal treatment, and opportunity to perform** were taken from a German version of the Selection Procedural Justice Scale and adapted for the purposes of this study (Bauer et al., 2001; Warszta, 2012). **Transparency** items were developed by the authors. **Fairness** items were taken from Warszta (2012) and adapted to our study. **Creepiness** items with the two facets emotional creepiness and creepy ambiguity were taken from Langer and König, (2017). One of the items for **privacy concerns** was taken from Smith, Milberg, and Burke (1996), two items were taken from Malhotra, Kim, and Agarwal (2004) and one items was developed by the authors. Twelve of the **overall organizational attractiveness** items were taken from Highhouse and colleagues (2003) and translated, and three more items were taken from Warszta (2012).

3.4.2 Manipulation check measures

Computer experience and the **information manipulation** were measured with items that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Four of the computer experience items were taken from Potosky and Bobko, (1998), and three more items as well as the one item for information manipulation were developed by the authors.

3.5 Data analysis

For Hypotheses 1-3 we used a multivariate analysis of variance (MANOVA) for a simultaneous overall evaluation of main and interaction effects (see Spector, 1977). This MANOVA included all dependent variables stated in Hypotheses 1, 2 and 3 (i.e., job relatedness, information known, open treatment, transparency, consistency, interpersonal treatment, opportunity to perform, fairness, creepiness and privacy concerns). Furthermore, we followed Spector's recommendations for these dependent variables and for organizational attractiveness and conducted analyses of variance (ANOVAs) to evaluate which dependent variables were especially affected by the experimental manipulations.

For the mediation Hypotheses 4 and 5, we used the PROCESS macro for SPSS (Hayes, 2013). We only included measures showing a significant difference between the independent variables because this is a precondition for a significant mediation effect (Baron & Kenny, 1986); the outcome variable of the mediation was overall organizational attractiveness. PROCESS offers a step-wise evaluation of mediation effects (for a detailed introduction see Hayes, 2013). First, it offers outputs for the effect of the independent variable onto the mediator variables. Second, its outputs indicate whether the mediating variables impacts the outcome significantly if the independent variable is also included in the regression model. Simultaneously, PROCESS evaluates whether the independent variable influences the outcome if the mediating variables are included in the regression model. Third, PROCESS provides bias-corrected bootstrapped estimates of the confidence intervals for the overall indirect effect, and if these do not include zero, this indicates a significant indirect effect of the independent variable on the outcome variable mediated by the respective mediator. Fourth, PROCESS offers calculating effect sizes for the mediation effect (for an introduction to effect sizes for mediation models see Preacher & Kelley, 2011).

4 Results

4.1 Manipulation checks

Regarding the manipulation check items for computer experience, participants in the computer science group had more computer experience than participants in the non-computer science group, $t(106.98) = 13.36$, $p < .01$, $d = 2.42$. Furthermore, regarding the manipulation check item for the information manipulation, participants in the high information group stated that they received more information about what the online interview is capable in comparison to the low information group, $t(118) = 14.12$, $p < .01$, $d = 2.59$.

4.2 Testing the hypotheses

Table 2 provides correlations and reliabilities for the study variables, and Table 3 presents descriptive statistics and results for the single ANOVAs.

Hypothesis 1 stated that computer science students will have more favorable perceptions towards a technologically advanced selection procedure than non-computer science students. Overall, the MANOVA showed no difference between computer science and non-computer science students, $F(11, 106) = 1.24$, $p = .27$, *Wilk's* $\lambda = .89$. Regarding single ANOVAs (see Table 3), no differences between computer science and non-computer science students were found for any of the variables, hence Hypothesis 1 was not supported.

Hypothesis 2 proposed that participants who are provided with high level of information will show more favorable perceptions towards a technologically advanced personnel selection method than participants who are provided with low level of information. Overall, there was a significant difference between the high information and the low information condition, $F(11, 106) = 5.35$, $p < .01$, *Wilk's* $\lambda = .64$. Regarding single ANOVAs (see Table 3), significant differences were found for information known, open treatment, and transparency which were all more positive for participants in the high information group. Thus Hypothesis 2 was partially supported.

Hypothesis 3 posited that there will be an interaction between information and participants' field of study on perceptions towards a technologically advanced personnel selection method. Overall there was no interaction between information and students' field of study $F(11, 106) = 1.04$, $p = .42$, *Wilk's* $\lambda = .90$. Regarding single ANOVAs (see Table 3), a significant effect was found for information known, where in contrast to the expected direction, computer science students showed a more pronounced positive effect of information on information known. Hence Hypothesis 3 was not supported.

Table 2.

Correlations and Cronbach's Alpha for the Study Variables

	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.	Computer Experience[a]	*.90*													
2.	Privacy Concerns	.11	*.72*												
3.	Emotional Creepiness	-.08	.32**	*.83*											
4.	Creepy Ambiguity	-.02	.24**	.64**	*.76*										
5.	Job Relatedness	-.07	-.04	-.32**	-.23*	*.80*									
6.	Information Known	.02	-.07	-.15	-.32**	.23*	*.87*								
7.	Opportunity to Perform	-.11	-.04	-.19*	-.15	.60**	.33**	*.88*							
8.	Objectivity	-.04	-.08	-.06	-.13	.07	.15	.14	*.67*						
9.	Interpersonal Treatment	.02	-.22*	-.31**	-.19*	.22*	.07	.23*	.16	*.88*					
10.	Open Treatment[a]	-.12	-.25**	-.32**	-.25**	.11	.27**	.15	.21*	.67**	*.78*				
11.	Fairness	.02	-.23*	-.40**	-.30**	.36*	.27**	.37**	.27*	.54**	.58**	*.82*			
12.	Transparency	.01	-.12	-.11	-.29**	.10	.28**	.14	.15	.31**	.32**	.33**	*.77*		
13.	Overall Attractiveness	.04	-.19*	-.30**	-.15	.44**	.25**	.39**	.18*	.48**	.43**	.55**	.15	*.93*	
14.	Field of Study	.77**	.16	-.09	.01	-.02	.04	.03	-.02	.01	-.09	.07	.04	.05	-
15.	Information Level	.02	-.06	.01	-.09	-.08	.49**	.06	-.04	.05	.22*	.17	.30**	-.02	-.05

Note. Coding of Field of Study: -1 = non-computer science students, 1 = computer science students. Coding of Information Level: -1 = low level of information, 1 = high level of information. Numbers in the diagonal represent Cronbach's alpha of the scales. $N = 120$.

[a] = one item of these scales was excluded because of impairing the reliability of the respective scale; in the case of computer experience two items were excluded.

*$p < .05$, **$p < .01$.

Table 3.

Descriptives and Results for the Single ANOVAS (Including Partial η² for the Dependent Variables)

	Condition				ANOVA					
	HI-CS	HI-OS	LI-CS	LI-OS	Main Effect (HI vs. LI)		Main Effect (CS vs. OS)		Interaction	
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*(1,116)	η^2_p	*F*(1,116)	η^2_p	*F*(1,116)	η^2_p
Privacy Concerns	5.34 (1.17)	5.04 (1.03)	5.50 (1.26)	5.09 (0.85)	0.28	.00	3.10	.03	0.08	.00
Emotional Creepiness	3.58 (1.03)	3.84 (1.10)	3.62 (1.49)	3.76 (1.12)	0.00	.00	1.91	.02	0.48	.00
Creepy Ambiguity	4.04 (1.10)	4.01 (1.05)	4.22 (1.00)	4.20 (1.24)	0.86	.01	0.01	.00	0.00	.00
Job Relatedness	2.24 (0.99)	2.27 (0.67)	2.35 (0.66)	2.41 (0.72)	0.76	.01	0.09	.00	0.01	.00
Information Known	3.35 (0.72)	2.91 (0.81)	2.07 (0.80)	2.26 (0.99)	39.41**	.25	0.60	.01	4.21*	.04
Opportunity to Perform	2.02 (1.14)	2.00 (0.60)	1.95 (0.75)	1.87 (0.65)	0.45	.00	0.13	.00	0.04	.00
Objectivity	3.46 (1.01)	3.31 (1.07)	3.33 (0.82)	3.57 (0.72)	0.13	.00	0.07	.00	1.39	.01
Interpersonal Treatment	3.74 (0.89)	3.91 (0.56)	3.87 (0.70)	3.64 (0.72)	0.25	.00	0.05	.00	2.36	.02
Open Treatment	3.45 (0.96)	3.74 (0.80)	3.24 (0.87)	3.21 (0.75)	5.62*	.05	0.68	.01	1.09	.01
Fairness	3.05 (0.89)	3.07 (0.74)	2.92 (0.95)	2.63 (0.75)	3.43	.03	0.76	.01	1.02	.01
Transparency	3.20 (0.91)	3.09 (0.83)	2.64 (1.01)	2.57 (0.75)	11.26**	.09	0.30	.00	0.01	.00
Overall Attractiveness	2.78 (0.69)	2.81 (0.48)	2.88 (0.73)	2.73 (0.69)	0.01	.00	0.27	.00	0.54	.01

Note: HI = high level of information, LI = low level of information, CS = computer science students, OS = non-computer science students. $n_{\text{HI-CS}} = 28$, $n_{\text{HI-OS}} = 34$, $n_{\text{LI-CS}} = 29$, $n_{\text{LI-OS}} = 29$.
*$p < .05$, **$p < .01$.

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Hypothesis 4 stated that perceptions towards technologically advanced selection methods will mediate the positive relation between studying computer science and overall organizational attractiveness. Results from Hypothesis 1 showed no influence of the field of study on perceptions towards technologically advanced selection procedures, consequently Hypothesis 4 was not supported.

Hypothesis 5 posited that perceptions towards technologically advanced selection methods will mediate the positive relation between information and overall organizational attractiveness. Mediation results are shown in Tables 4 and 5. These results indicate that there was a significant positive effect of information on overall organizational attractiveness mediated by more positive perceptions of open treatment, and information known towards the technologically advanced selection procedure (see Table 4 and 5). However, there was also a direct negative effect of information on overall organizational attractiveness counterbalancing the positive effect of the positive perceptions towards the selection procedure on overall organizational attractiveness (see Table 4). Thus, Hypothesis 5 was partially supported. This suggests that information worked as a suppressor and it solves the contradictory result that high information was positively related to perceptions of the selection procedure and that positive perceptions towards the selection procedure correlated positively with overall organizational attractiveness but that there was no zero-order positive relation between information and overall organizational attractiveness. The resulting model is displayed in Figure 2.

Table 4.

Regression Results for the Mediation of Perceived Information Known, Open Treatment, and Transparency between Information Level and Overall Organizational Attractiveness

Model	R^2	Coefficient	*SE*	*p*	95% CI
Single effects					
HI vs. LI → Perceived Information Known	.24	0.47	0.08	<.01	[0.31, 0.62]
HI vs. LI → Open Treatment	.05	0.19	0.08	<.05	[0.04, 0.34]
HI vs. LI → Transparency	.09	0.27	0.08	<.01	[0.11, 0.42]
HI vs. LI → Overall Organizational Attractiveness	.00	-0.01	0.06	.92	[-0.12, 0.11]
Model complete	.24	-	-	<.01	-
Perceived Information Known → Overall Organizational Attractiveness		0.17	0.06	<.01	[0.04, 0.29]
Open Treatment → Overall Organizational Attractiveness		0.30	0.07	<.01	[0.17, 0.43]
Transparency → Overall Organizational Attractiveness		0.01	0.06	.80	[-0.11, 0.14]
HI vs. LI → Overall Organizational Attractiveness		-0.15	0.06	<.05	[-0.27, -0.03]

Note. The 95% confidence interval for the effects was obtained by the bias-corrected bootstrap with 10,000 resamples. Coding of the variable HI vs. LI: -1 = low information, 1 = high information. CI = confidence interval, HI = high level of information, LI = low level of information. n_{HI} = 62, n_{LI} = 58.

Table 5.

Results for the Indirect Effects of Level of Information over Perceived Information Known, Open Treatment, and Transparency on Overall Organizational Attractiveness

Model	IE_{med}	SE_{Boot}	95% CI
Total indirect effect	.22	0.07	[0.09, 0.37]
HI vs. LI → Perceived Information Known → Overall Organizational Attractiveness	.12	0.06	[0.03, 0.26]
HI vs. LI → Open Treatment → Overall Organizational Attractiveness	.09	0.04	[0.02, 0.19]
HI vs. LI → Transparency → Overall Organizational Attractiveness	.01	0.03	[-0.06, 0.07]

Note. The 95% confidence interval for the effects was obtained by the bias-corrected bootstrap with 10,000 resamples. Coding of the variable HI vs. LI: -1 = low information, 1 = high information. IE_{med} = completely standardized indirect effect of the mediation. SE_{Boot} = standard error of the bootstrapped effect sizes, CI = confidence interval, HI = high level of information, LI = low level of information. $n_{HI} = 62$, $n_{LI} = 58$.

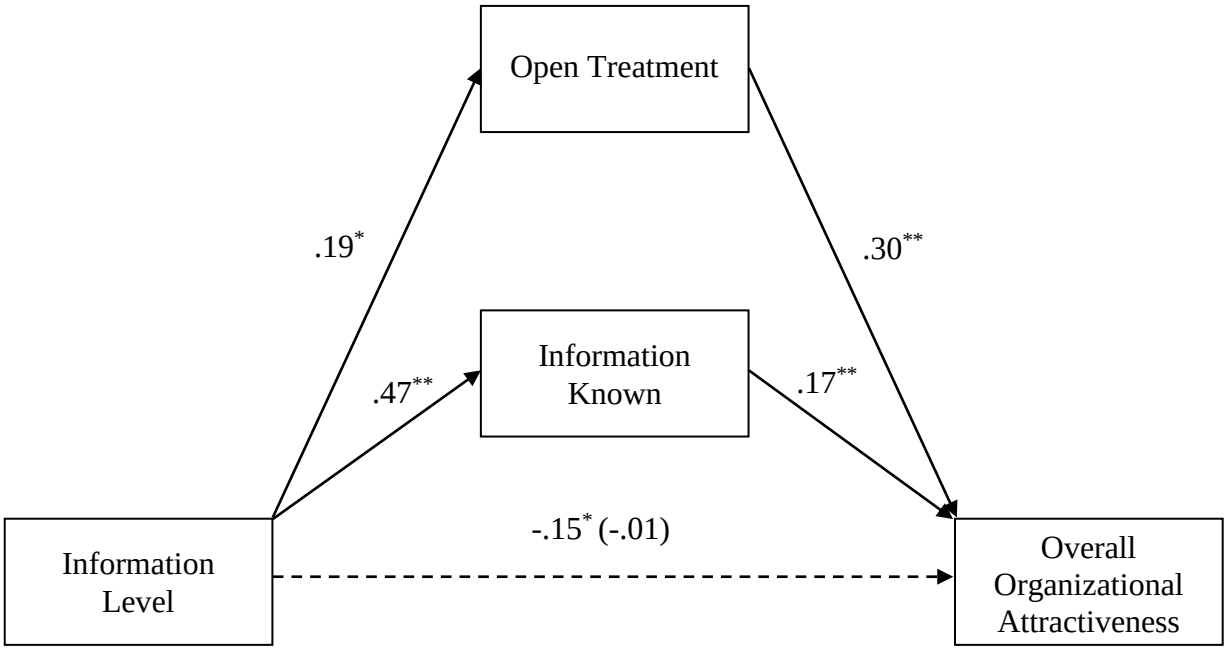

Figure 2. Suppressor model. The number in brackets displays the zero-order correlation of information level and overall organizational attractiveness.

5 Discussion

The present study responded to the call for research on novel technologies for personnel selection (e.g., Blacksmith et al., 2016; Stone & Deadrick, 2015). It represents one of the first studies shedding light on applicant reactions towards technologically advanced selection procedures regarding the influences of computer experience and information. The results point to three main findings. First, applicants high on computer experience (i.e. computer science students) were similar to those with lower computer experience in their reactions to a technologically advanced selection procedure and to the organization using these procedures. Second, providing applicants with information on technologically advanced personnel selection situations can improve applicant reactions and organizational attractiveness. Third, these information, however, can be a double-edged sword as the positive indirect effect of information on organizational attractiveness was counterbalanced by a negative direct effect of information on organizational attractiveness.

Our finding that computer science students do not differ from non-computer science students contradicts previous research findings that had proposed that computer-experienced applicants will perceive technology in selection differently than other applicants (Bauer et al., 2006; Wiechmann & Ryan, 2003). Possibly, computer science students have a better idea about current technologies and might therefore have been less convinced that the presented (technologically advanced) interview would really be an alternative for a classical selection interview. This explanation is in line with previous research in the area of technology acceptance, where the technology acceptance model (TAM, Davis, 1989; Venkatesh, Morris, Davis, & Davis, 2003) implies that users will accept a technology less if they doubt its usefulness and ease of use. Maybe applicants with much computer science knowledge appreciate a selection procedure only if they perceive that it is near to technological perfection, but if they realize that some technical components (e.g., voice of the virtual

character, analytical algorithms) are not working perfectly, they will doubt its usefulness and as a result, the selection procedure does not convince them.[2]

In addition, it was expected that people with more computer experience would benefit less from information. We found contrary evidence such that computer science students who received information had stronger reactions to information than non-computer science students. This suggests that computer science students are particularly appreciative when they are provided with information. However, it could also be that computer science students were more capable of absorbing and understanding the information given to them. Clearly, this counter-intuitive finding raises the need for further research.

The second main finding of the current study was that providing more information was beneficial for applicants' evaluation of transparency, open treatment, and information known, thus supporting assumptions of Gilliland's (1993) and Schuler's (1993) models that indicate that information, honesty, transparency, and increased controllability through information influence applicant reactions positively. As suggested by previous research (Gilliland, 1993; McCarthy et al., 2017; Schuler, 1993; Truxillo et al., 2009), information provided to applicants in the current study focused on informational fairness – specifically honesty, selection information, and job relatedness, which should have impacted various facets of applicant reactions. However, we found that the information predominantly affected applicant perceptions of the selection procedure that are conceptually related to an honest treatment during the selection procedure. It might not be surprising that providing information leads to higher feelings of honesty, transparency and to feelings of being treated more openly. In hindsight, it is also less surprising that the information variation did not influence feelings of interpersonal treatment, because the level of interpersonal treatment was

[2] Special thanks to an anonymous reviewer for suggesting this alternative explanation.

equal for all participants. However, it is striking that the provided information did not influence perceptions of job relatedness and opportunity to perform. A reason for this could be that participants were skeptical about the validity of this selection procedure despite receiving information regarding its validity. This is an important finding that adds to previous research on information in the context of personnel selection (e.g., McCarthy et al., 2017; Truxillo et al., 2009), as it suggests that applicants may not believe everything that is told to them. Indeed, applicants can still be skeptical about the job relatedness of a selection procedure and about their chance to show their skills during selection procedures.

It should also be noted that the provision of information did not affect feelings of creepiness nor privacy concerns. This is in contrast to former research which had postulated that creepiness and privacy concerns would be influenced by information (Malhotra et al., 2004; Stone-Romero et al., 2003; Tene & Polonetsky, 2015). As we have pointed out, creepiness, privacy concerns, and opportunity to perform are related to the concept of controllability (Bauer et al., 2001; Malhotra et al., 2004; Shin, 2010; Smith, Dinev, & Xu, 2011; Tene & Polonetsky, 2015). Therefore, the results of this study suggest that information provided to participants was not able to increase feelings of controllability. As such, there are other pieces of information that might be more impactful regarding controllability. For instance, future research may want to explore whether information focusing on reassurance (e.g., explaining to applicants that even though this is a novel selection procedure, it is not really different from other common procedures, cf. McCarthy et al., 2017) may increase feelings of controllability.

The most important contribution of this study is that it provided insight into the equivocal effects that information can have on applicant reactions towards technologically advanced selection procedures and the selecting organization. Our results suggest that information can be a double-edged sword considering reactions towards the selecting

organization. Although there was a positive indirect effect of information on overall organizational attractiveness through open treatment and information known which is in line with former research (McCarthy et al., 2017; Truxillo et al., 2009), this positive effect was diminished by a direct negative effect of information on overall organizational attractiveness. These two opposing effects of information on overall organizational attractiveness indicate that applicants are on the one hand thankful that they are being treated honestly, but on the other hand perceive the organization more negatively. A cause for this might be that applicants are somehow intimidated by being informed about technological aspects of the selection procedure. In addition, the low information group had less reason to be skeptical as they had no information about what is happening during the procedure, whereas the high information group had enough information to start questioning the selection procedure (e.g., they might have wondered whether it is really possible to infer job performance through analyzing speech). Consequently, specific pieces of information such as providing applicants with information including technical details can diminish applicants' reactions and their intentions to apply and recommend the organization.

However, it might also be possible that there is a specific amount and composition of information that negatively affects acceptance. Information provided in the current study was rather detailed, offering the possibility that this particular amount of information was detrimental[3] because it was enough to make participants skeptical about the selection procedure and the organization, but not enough to explain the procedure and the reasons why the organization was using this procedure. For instance, if we had provided even more information about the selection procedure (e.g., benchmark information that other companies also use this procedure), participants might have less reason to react negatively.

[3] We thank an anonymous reviewer for this suggestion.

In conclusion, *what* information and *how* much information is being given to applicants seems critical when designing information on technologically advanced selection procedures. As research on technologically advanced selection procedures is still in its infancy, more research is needed to more fully understand the effect of information.

5.1 Limitations

Four main limitations of this study need to be discussed. First, a quasi-experimental design was used when computer science students were used as a proxy for computer experience; albeit as the manipulation check implies, this proxy worked quiet well as we found a large difference in computer experience between the two studied student groups.

Second, since one of the groups consisted entirely of computer science students (who were predominantly male) and the other group mostly of human science students (who were predominantly female) this resulted in an unequal gender distribution between these groups. However, we reran our analyses with gender as a covariate. Results indicate that gender was not a significant covariate and there were only slight changes of *p*-values that would not have impacted conclusions of the current study. In addition, we reran the analyses with age as a covariate, which was not a significant covariate either and did not impact the results and conclusions of this study.

Third, participants only watched a video showing a technologically advanced selection procedure. Thus, findings may have differed had applicants experienced a real selection situation. Nonetheless, research has suggested that laboratory and field research converge better than typically assumed (Mitchell, 2012). However, future studies might investigate whether participants who experience comparable selection procedures in real life experience more pronounced effects (e.g., more severe privacy concerns, cf., Smith et al., 2011).

Fourth, participants were introduced to a mock selection situation only. Indeed, it would be highly interesting to apply the current design to a real application situation. However, such a study would evoke ethical concerns because real applicants would be provided with different levels of information, potentially negatively affecting an organization's reputation.

5.2 Main practical implications

First, if an organization decides to use a technologically advanced selection procedure, it might not have to be concerned about scaring off specific applicants. However, it can neither hope to attract computer-experienced applicants.

Second, organizations using novel technologies for their selection procedures and hoping to improve applicant reactions through information should be think twice about which kind of information they provide because of information being a double-edged sword. On the one hand, applicants might appreciate being informed about the selection procedure as it would elicit feelings of being treated more openly. On the other hand, applicants view the organization as less attractive which could be detrimental for the organization. For instance, applicants might advise their peers against applying to an organization because of its use of strange selection procedures (cf., Van Hoye & Lievens, 2009).

5.3 Future research

Future studies could continue to investigate the role of computer experience when applicants undergo selection procedures similar to the one used in this study. Even if the current study did not find that computer experience impacted applicant reactions, it could still be an important variable if applicants have to interact directly with novel technologies (cf., Smith et al., 2011). For instance, less computer-experienced applicants might be affected differently by usability aspects of technologically advanced selection procedures compared to computer-experienced applicants, as they might know better how to handle technologically

challenging situation (cf., Bauer et al., 2006; Davis, 1989; Venkatesh et al., 2003). Additionally, different kind of novel technologies could differentially impact applicants with varying computer experience. For instance, digital interviews could be compared to interviews with virtual characters and to automatically evaluated telephone interviews.

Another direction for future research could be to delve deeper into the role of information. For example, it may be possible to separate pieces of information which could positively affect applicants. In the current study, participants were given information pertaining to the process as well as a justification for using that process. In the process information part, participants were informed in-depth about what will be happening during the interview (e.g., that applicants voice and gestures are being analyzed), whereas in the process justification part, participants received information about why exactly the online interview will be used for selecting applicants (e.g. because it is job relevant and personality can be inferred). Accordingly, future studies could specifically look at the influence of these different pieces of information.

Furthermore, the current study raises questions about the role of information in situations where humans interact with technology. Information may detrimentally affect reactions towards technology in situations other than personnel selection. The effects this study revealed could also apply to conceptually related fields like personnel development in organizations, where automated training methods with virtual characters are used (e.g., Langer et al., 2016), but also for less closely related fields, for example health care robots for elderly people (Broadbent, Stafford, & MacDonald, 2009). In the latter case, providing people who are interacting with the robot with information about what the robot is able to do, which sensors the robot uses to interact with people, and why this robot is used might provoke feelings of transparency and usefulness, but at the same time the information might evoke concern.

5.4 Conclusion

The effects of computer experience and information in the context of technologically advanced are more complex than expected. The current study showed that just because persons are enthusiastic about computers and technology does not mean that they are in favor of being selected by novel technologies. Moreover, informing people about a selection procedure does not necessarily lead to positive applicant reactions to this procedure.

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Appendix A

Items Used in the Current Study

Job relatedness	Doing well on this interview means that a person can do the job well.
	A good performance at this online interview will give information if a person is a good candidate for the advertised job.
	A person who did well in this interview will become a good employee.
	This personnel selection procedure can distinguish between good and poor employees.
Information known	I knew what to expect in the online interview.
	I understood in advance what the interview process would be like.
	I had ample information about what the format of the interview would be.
Consistency	The interview is administered to all applicants in the same way.
	There were no differences in the way the interview is administered to different applicants.
Open treatment	During the online interview there were no intentions to hide anything from me.
	Applicants are treated honestly and openly during the online interview.
	Procedural questions were answered in a straightforward and sincere manner.
Interpersonal treatment	During the online interview applicants were treated politely.
	During the online interview applicants were treated with respect.
	I was satisfied with the treatment of the applicant during the online interview.
Opportunity to perform	The applicant could really show her skills and abilities through the interview.
	This interview allows applicants to show what their job skills are.
	This interview gives applicants the opportunity to show what they can really do.
Transparency	The online interview was transparent.
	It is obvious what the online interview is measuring.
Fairness	All things considered this selection procedure was fair.
	I think this interview is a fair procedure to select people for the job.
	I think the interview itself was fair.
Creepiness	During this situation, I had a queasy feeling.
	I had a feeling that there was something shady about this situation.
	I did not know how to judge this situation.
	I felt uneasy during this situation.
	I had an indefinable fear during this situation.
	During this situation, I did not know exactly what was happening to me.
	This situation somehow felt threatening.
	During this situation, things were going on that I did not understand.
	I did not know exactly how to behave in this situation.
	I did not know exactly what to expect of this situation.
Privacy Concerns	I am concerned that companies are collecting too much personal information about me.
	I am concerned about my privacy.

	To me it is important to keep my privacy intact.
	Novel technologies are threatening privacy increasingly.
Overall organizational attractiveness	For me, this company would be a good place to work.
	This company is attractive to me as a place for employment.
	I am interested in learning more about this company.
	A job at this company would be very appealing to me.
	If this company invited me for a job interview, I would go.
	I would accept a job offer from this company.
	I would make this company one of my first choices as an employer.
	I would like to work for this company.
	I would recommend this company to friends.
	I have friends who would be interested in this company.
	I would recommend others to apply at this company.
	Employees are probably proud to say they work at this company.
	This company probably has a reputation as being an excellent employer.
	There are probably many who would like to work at this company.
	This is a reputable company to work for.
Computer experience	I know how to write computer software.
	I frequently read computer magazines or other sources of information that describe new computer technology.
	I know how to recover deleted or “lost data” on a computer or PC.
	I am computer literate.
	I use the computer for communication via email or for social networks.
	I use the computer for videoconferences (e.g., Skype).
	I know what CSS and LaTeX in the computer context mean.
Information manipulation	Information I received before the online interview explained to me what the program is capable of.

Note. Items translated from German.