Abstract

Applicant fairness perceptions of asynchronous job interviews were assessed among panelists (Study 1, $N = 160$) and actual higher educated applicants (Study 2, $N = 103$). Furthermore, we also examined whether personality explained applicants' perceptions. Participants, particularly actual applicants, had negative perceptions of the fairness and procedural justice of asynchronous job interviews. Extraverted applicants perceived more opportunity to perform with the asynchronous job interview than introverts. A trait interaction between Neuroticism and Extraversion was tested, but no significant results were found. Although the first selection stage is increasingly digitized, this study shows that applicant perceptions of asynchronous job interviews are relatively negative. The influence of personality on these perceptions appears limited.

Keywords: asynchronous job interviews, applicant perceptions, personality, personnel selection, recruitment

Applicant Perceptions of Initial Job Candidate Screening with Asynchronous Job Interviews– Does Personality Matter?

As technological developments for recruitment and selection are moving rapidly, organizations are increasingly using multimedia technology in the first step of the selection process (Nikolaou & Oostrom, 2015). Apart from the mere availability of advanced technological tools, organizations digitize the first step of the selection process to reduce costs and for a globalized outreach (Blacksmith, Willford, & Behrend, 2016). Recently, the increased use of multimedia techniques in recruitment and selection has resulted in the emergence of video applications, including asynchronous job interviews (Brenner, Ortner, & Fay, 2016; Langer, Koenig, & Krause, 2017). With the introduction of these kind of interviews, auditory and visual information of the applicant is introduced in the earliest screening phase (i.e., usually in addition to the traditional written resume), and information is exchanged in an asynchronous manner (i.e., the employer views the application at a later point in time). This differentiates asynchronous job interviews from real-time, video-supported interviews (e.g., Skype).

Although organizations seem to be highly interested in using video applications in the first selection stage, scientific research on the adoption of video applications is still scarce. When it comes to the adoption of new technology, applicant perceptions have been identified as an important research theme (McCarthy et al., 2017). Negative perceptions may lead to applicants' refusal of job offers, withdrawal, and litigation (Hausknecht, Day, & Thomas, 2004). However, recent research on applicant perceptions of new technology suffers from several problems. First, research on the adoption of multimedia techniques in general, and video applications in particular, has revealed contradicting findings. For example, the review of McCarthy et al. (2017) conveyed that most studies investigating applicant perceptions of internet-based testing

reported positive applicant perceptions. In contrast, the recent meta-analysis by Blacksmith et al. (2016) has found negative effects of technology-mediated interview methods (e.g., phone and video-conference) in terms of applicant perceptions. Note, however, that this meta-analysis included only four published studies on applicant perceptions, showing the need for more research on applicant perceptions of video applications. Second, several calls for more theoretically driven research have been made (see McCarthy et al., 2017; Table 2). In most studies, the underlying causes of applicant perceptions often remain unclear. One of the few exceptions is the study by Langer et al. (2017) who used Potosky's (2008) framework of media attributes to compare digital interviews to videoconference interviews. Without a strong theoretical basis, it will be difficult to explain why applicants react more positively to certain multimedia techniques but less so to others. Third, to select talent, it is important to know whether the use of multimedia techniques (like video applications) is accepted by applicants with generally desirable characteristics. In general, much is still unknown regarding the determinants of applicant perceptions, including stable individual difference variables, to selection instruments (Ryan & Ployhart, 2000), let alone to video applications in particular. Fourth, most studies on applicant perceptions are conducted among students and in lab-situations (Anderson, Salgado, & Hülsheger, 2010; Brenner et al., 2016), limiting the generalizability of findings.

The present study hopes to reconcile the contrasting findings on applicant reactions to technology by testing the assumptions of two theories, namely media richness theory (Chapman & Webster, 2001), and Brockner, Ackerman and Fairchild's (2001) notion of perceived legitimacy to explain applicant perceptions of asynchronous job interviews. Furthermore, this study will explore the role of personality, and trait interactions in particular, as determinants of perceptions of asynchronous job interviews. We will test our hypotheses in two samples: Among

a panel recruited via Amazon's Mechanical Turk (Study 1) and among highly educated

applicants that were actually exposed to the evaluated selection instruments (Study 2)[1].

Applicant Perceptions of Video Applications

A major impetus for research on applicant perceptions has been from the perspective of

Gilliland's (1993) procedural and distributive justice model. This model outlines several

situational factors and individual differences that are proposed to affect applicants' procedural

justice perceptions. Procedural justice perceptions (Gilliland, 1993) are characterized by the

extent to which a test appears to measure job relevant content (face validity) and at the same time

appears to be predictively valid (perceived predictive validity), as well as providing enough

opportunity to show one's skills and competencies (opportunity to perform).

Research on applicant perceptions of new technology in selection, and video applications

in particular, is still scarce. Brockner et al. (2001) have argued that the more familiar an

applicant is with a certain selection procedure, the more legitimate the procedure will appear.

According to the notion of perceived legitimacy, applicants see commonly used instruments as

normatively correct; they expect these instruments to be part of the selection procedure and value

their use. Meta-analyses indeed show that applicants have positive reactions towards commonly

used, more traditional instruments, including written resumes and employment interviews

(Anderson et al., 2010; Hausknecht et al., 2004). Thus, perceived legitimacy would predict

relatively negative applicant perceptions towards asynchronous job interviews.

Yet, according to media richness theory (Chapman & Webster, 2001), the effectiveness

of communication depends on the capabilities of the used medium to fulfill communication

requirements. Richer media are considered to be more effective than other media (e.g., solely

---

[1] Actual applicant data (Study 2) were collected prior to the panel data. For readability purposes we decided to present the panel data first (Study 1).

text based) at conveying information of an equivocal or personal nature (Frasca & Edwards, 2017). This media richness might be particularly important in the first stage of the selection procedure, in which only limited applicant information is available to the hiring organization and interaction between the applicant and hiring organization is still low. The goal of this first stage of the selection procedure is to perform an initial screening of whether applicants possess the desired knowledge, skills, abilities, and other characteristics that are needed for the job. This screening is often done very quickly, within seconds snap judgments are made (Blackburn-Brockman & Belanger, 2001). By including video applications, more information and media richness is added to this initial phase, which may be desired by applicants, even though it is new to them and may cause feelings of 'creepiness' (Langer et al., 2017). Following media richness theory, the use of natural language and the use of verbal and nonverbal cues to convey the applicant's intended message is better supported by new video technology in the pre-testing phase, such as via video applications, compared to solely text based applications which are usually used in the pre-testing phase (Hausknecht et al., 2004). Apart from the selection phase, it appears that innovative selection methods can indeed lead to favorable perceptions (e.g., Bruk-Lee et al., 2016; Hiemstra & Derous, 2015). For example, Chan and Schmitt (1997) showed that applicants prefer new techniques (i.e., video-based SJT) over traditional techniques (i.e., paper-and-pencil SJT) in terms of face validity. Similarly, Richman-Hirsch, Olson-Buchanan, and Drasgow (2000) showed that applicants perceive a multimedia test as more fair compared to their paper-and-pencil and computerized counterparts. Recently, McCarthy et al. (2017) conveyed in their review that most studies investigating applicant perceptions of internet-based testing reported positive reactions.

In the most recent meta-analysis by Anderson et al. (2010), selection instruments can be grouped into three categories: most preferred (interviews and work samples), favorably evaluated (resumes, personality questionnaires, biodata, references, and cognitive tests), and least preferred (graphology, contacts, and honesty tests). Thus, although the notion of legitimacy by Brockner at al. (2001) would predict asynchronous job interviews to fall into the category of least preferred selection instruments, based on the application of media richness theory to the first stage of the selection procedure and the findings on applicant perceptions of other innovative selection instruments, we predict asynchronous job interviews to fall into the category of favorably evaluated instruments. Our hypothesis therefore is:

Hypothesis 1: Applicants react favorably to asynchronous job interviews in terms of overall fairness (**H1a**), face validity (**H1b**), perceived predictive validity (**H1c**), and opportunity to perform (**H1d**).

Determinants of Applicant Perceptions

To attract applicants with specific characteristics (e.g., Conscientiousness, Extraversion), positive applicant perceptions are essential as they have meaningful effects on applicants' selection related attitudes, intentions, and behaviors (McCarthy et al., 2017). People with certain personality traits may prefer some selection methods over others, based on the constructs the methods intend to measure (e.g., interpersonal skills) or their medium (e.g., multimedia). Only a few studies, however, have examined the effects of individual differences on procedural justice perceptions. These studies concerned a variety of selection instruments and results were mixed (Honkaniemi, Feldt, Metsäpelto, & Tolvanen, 2013).

Evidence of the effect of personality on applicant reactions is generally weak. The role of personality in applicant perceptions of asynchronous job interviews was recently studied by

Brenner et al. (2016) among 106 students. Openness to experience moderated the relation between perceived usefulness and attitudes towards the asynchronous interview. No significant results were found for Extraversion, Neuroticism, and Conscientiousness. Apart from this study, we are not aware of studies that have looked into the role of personality in applicant perceptions of asynchronous job interviews. Thus, this study will be the first to examine the role of traits and trait interactions in applicant perceptions of video applications in non-student samples.

Nevertheless, because of the self-presentational nature of video applications, hypotheses can be drawn from previous studies on personality and online self-presentation on Social Networking Sites (SNS) such as Facebook and on user-generated media (UGM), such as postings on YouTube (e.g., Seidman, 2013; Shao, 2009). Research has shown, for instance, that extraverts tend to use social media more often and tend to self-disclose more online. Furthermore, Extraversion is related to self-monitoring (i.e., the need to self-promote within reasonable honesty). It has been argued that Facebook users attempt to convey an image of the self that is both consistent with the underlying personality and strategically managed to promote positive aspects of the self (Hall & Pennington, 2013; Rosenberg & Egbert, 2011). The difference between online postings on SNS and video applications is that SNS postings are done voluntarily and often for social reasons such as the wish to belong and communicate, as opposed to video applications which are requested by the hiring organization. Applying with a videotaped message, however, does require self-presentational and self-monitoring skills. Based on social media research (Seidman, 2013; Wilson, Fournasier & White, 2010) and because extraverted people tend to be sociable, expressive, and attention seeking (Costa & McCrae, 1992), we expect extraverts would perceive video applications, in which they can audibly and visually present themselves, more positively than introverts:

Hypothesis 2: Extraversion is positively related to the fairness and procedural justice perceptions of video applications (asynchronous job interviews).

Applicant perceptions may be the result of personality characteristics working simultaneously, and not of one isolated trait. The interconnectedness of personality variables may explain the generally weak results that have been found regarding the relation between personality and applicant perceptions, because only single correlations were used. Taking a person-centered approach allows researchers to focus on differences among individuals and not just single traits (i.e., the variable approach; Honkaniemi et al., 2013; Laursen & Hoff, 2006). Following this person-centered approach, Bye and Sandal (2016) looked into the role of trait interactions to study the influence of personality on applicant perceptions. They asserted that at higher levels of Neuroticism, levels of Extraversion are more predictive of applicant perceptions of job interviews. At low levels of Neuroticism, Extraversion may be less predictive of applicant perceptions, because being calm and comfortable may be enough to render the job interview a positive experience, even for applicants who are not particularly talkative or sociable. Bye and Sandal (2016) collected data among actual applicants attending a group selection interview. Results showed some evidence for an increase of levels of justice perceptions with higher levels of Extraversion among high scorers on Neuroticism. No effects of Extraversion were found for emotionally stable applicants. These findings were in line with Honkaniemi et al. (2013) who asserted that applicants with a combination of high scores on Neuroticism and low scores on Extraversion rated a selection process as less fair compared to applicants who did not have this profile (i.e., also including applicants scoring low on Neuroticism and high on Extraversion). To test the generalizability of these findings to other selections instruments, we propose the following hypothesis:

Hypothesis 3: The effect of Extraversion on applicant perceptions of video applications (asynchronous job interviews) will be stronger for applicants scoring high on Neuroticism (interaction).

To test these hypotheses, data were collected in two samples: Among panelists (Study 1) and among actual applicants (Study 2).

Method Study 1

Participants and Procedure

Participants ($n = 160$) were recruited via Amazon's Mechanical Turk ($M_{age} = 39.04$; $SD = 10.76$; 47% female). Participants were required to have a US Bachelor's degree to be allowed to participate. Average work experience was 14.87 years ($SD = 10.22$). Most participants held a Bachelor (78%) or higher degree (Master/PhD, 12%). Participants were familiar with multimedia (assessed with one 5-point Likert-scale item 'How often do you use multimedia?'; $M = 4.09$, $SD = 1.05$). After having given their informed consent, participants completed a survey measuring their perceptions of asynchronous job interviews and their personality. To ensure a similar understanding of the type of video application, the following definition was given for asynchronous job interviews: "a short video job interview that takes place remotely and uses video technology as the communication medium. In a web-based asynchronous job interview, the employer poses three questions and asks job seekers to record their responses in a video. The video is reviewed at a later point in time by the employer (asynchronous). This sets it apart from web-based real-time interviews (synchronous; e.g., using Skype)".

Measures

Applicant perceptions. Participants completed a set of items adapted from earlier research on fairness (Kluger & Rothstein, 1993; 4 items) and procedural justice dimensions

(Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993; 13 items). An example item for overall fairness perceptions is: "Most people would say the asynchronous job interview is fair". Example items for procedural justice perceptions are: "It would be obvious to anyone that the asynchronous job interview is related to a job" (Face validity; 4 items), "I am confident that the asynchronous job interview can predict how well an applicant will perform on the job" (Perceived predictive validity; 5 items), and "The asynchronous job interview gives applicants the opportunity to show what they can really do" (Opportunity to perform; 4 items). All Likert-type items were rated on a five-point scale (1 = *not at all applicable*; 5 = *very much applicable*). Alphas ranged between .71 and .94 (Table 1). Confirmatory factor analysis (using AMOS v.20) with the four perceptions as the lower-order factors and overall perceptions as higher-order factor provided an acceptable fit to the data, $\chi^2 = 347.53$, $df = 113$, $p = .00$, CFI = .91, RMSEA = .11.

Personality. Big Five personality traits were measured with 50 items taken from the International Personality Item Pool (Goldberg, 1999). Each dimension was measured with 10 items on a on a five-point scale (1 = *very inaccurate*, 5 = *very accurate*). An example item for Conscientiousness is "*I follow a schedule*". Reliabilities (alphas) were substantial for Extraversion (.93), Agreeableness (.89), Conscientiousness (.87), Neuroticism (.94), and Openness to experience (.84).

Results Study 1

Descriptive statistics, correlations, and reliabilities of all study variables are presented in Table 1. Hypothesis 1, on applicant perceptions of the asynchronous job interview, was tested with one-sample *t*-tests. We compared perceptions of the asynchronous interview (Table 1) with the average perception scores (transformed from a 7-point scale onto a 5-point scale by dividing

the mean score by 7 and then multiplying it by 5) in Anderson et al.'s (2010) category of favorably evaluated selection instruments (overall perception: $M = 3.18$; face validity: $M = 3.26$; opportunity to perform: $M = 3.28$). In line with our hypothesis, perceptions of fairness ($M = 3.53$, $SD = 0.83$) and face validity ($M = 3.61$, $SD = 0.83$) were significantly higher than the average perception scores of the favorably evaluated instruments (all $p's = .000$), but significantly lower than the average perception scores of the most preferred selection instruments (overall perception: $M = 3.79$; face validity: $M = 3.84$; opportunity to perform: $M = 3.86$) all $p's = .000$). Average perceptions of perceived predictive validity were not directly reported in Anderson et al.'s meta-analysis, but the predictive validity ($M = 3.07$, $SD = 0.88$) of the asynchronous job interview did not differ from the average overall perception score of the favorably evaluated instruments ($t = -1.62$, $p = .11$).

Hypothesis 2, on Extraversion, was partly supported. Extraversion related positively to perceptions of video applications (Table 1) with regard to predictive validity ($r = .19$, $p = .02$) and opportunity to perform ($r = .25$; $p = .002$).

In Hypothesis 3 an interaction between Neuroticism and Extraversion was proposed. This was tested with hierarchical regression analyses (stepwise: personality was entered in Step 1 and the interaction of Neuroticism X Extraversion in Step 2). No support was found for an interaction effect (e.g., Test fairness: $\beta_{Interaction} = -.05$; $p = .50$, $F[6,153] = 1.56$, $p = 0.16$). Thus, Hypothesis 3 was not supported[2].

Discussion Study 1

---

[2] The role of personality (i.e., Conscientiousness, Agreeableness, and Openness to experience) in applicant perceptions was further explored. Study results are available upon request.

Study 1 shows that applicant perceptions of video applications are relatively favorable. These findings are in line with the media richness theory (Chapman & Webster, 2001). The use of verbal and nonverbal cues to convey the applicant's intended message seems to be better supported by video applications, compared to solely text based applications which are usually used in the pre-testing phase (Hausknecht et al., 2004). Study 1 also shows that extraverted applicants perceived more opportunity to perform with video applications compared to introverts. Video applications may allow for more self-presentation compared to other instruments due to the increased social bandwidth, i.e., the number of social cues that a medium can be expected to carry (Potosky, 2008). Because of their sociable and expressive nature (Costa & McCrae, 1992), extraverts are likely to appreciate a selection instrument with an increased number of social cues, such as video applications. The role of trait interactions on applicant perceptions was tested here too, particularly regarding Neuroticism and Extraversion, but no support was found for such an interaction.

Study 1 was conducted among paid participants that were recruited via MTurk. These participants were not necessarily applicants. Furthermore, despite the definition of the video application in the instruction, these participants may not have had experience with this type of selection instrument. To address these limitations, and to test the generalizability of our findings, we tested our hypotheses a sample among actual applicants.

Method Study 2

Participants and Procedure. Participants were 103 real applicants applying for a Dutch entry-level legislative lawyer traineeship position ($M_{age} = 26.27$; $SD = 4.47$; 60% female; 59.5% response rate). Applicants had limited work experience ($M_{work\ experience} = 2.01$, $SD = 3.11$). All held a master degree in Law, except for one participant who had not yet graduated. The sample

consisted of 79% Western ethnic majority applicants and 21% non-Western ethnic minority applicants. This mirrors the Dutch labor force with an academic major in Law, which consists of 20% ethnic minorities (Central Bureau of Statistics, 2012). Applicants were familiar with multimedia (assessed with one 5-point Likert-scale item 'How often do you use multimedia?'; $M = 4.45$, $SD = 0.79$).

Applicants were recruited by the hiring organization and they applied for 12 available traineeship positions. Applicants were informed about the phases of the selection procedure via the website of the hiring organization. The first phase of the multi-hurdle selection procedure consisted of an online application including an asynchronous job interview. The asynchronous job interview implied applicants to answer three standardized questions that were presented after logging into an existing web-based program. The answers were recorded at home by the applicants (i.e., the applicants logged into the program on their personal computer and recorded their answers in a webcam). The questions were defined by the hiring organization and were: 'Could you please tell a bit more about yourself', 'What is your motivation to apply for this position', and 'Why should we hire you instead of someone else'. Applicants were uninformed in advance about the content of the questions and they had one opportunity to re-record their answers before sending the video to the hiring organization. Each answer could not be longer than one minute.

After having submitted the application, the applicant received a confirmation e-mail from the hiring organization. This e-mail also contained an invitation to participate in the present research. This e-mail stated that the research and data streaming were independently organized and in no way related to the selection decisions. After having given their informed consent, participants completed the e-survey via a link in the e-mail. All surveys were completed after

having applied with a video application, but before feedback was given by the hiring organization.

The second stage of the selection procedure consisted of a structured interview, a cognitive ability test, and a personality questionnaire. Of the 103 participants in our study, 45 were selected for this second selection stage. The test results of these 45 participants were matched with the survey results, in such a way that after matching, the results could not be traced back to individual applicants.

Applicant perceptions. Items were similar to the ones used in Study 1. Alphas in Study 2 ranged between .71 and .87 (Table 2). Confirmatory factor analysis (using AMOS v.20) with the four perceptions as the lower-order factors and overall perceptions as the higher-order factor provided an adequate fit to the data, $\chi^2 = 166.96$, $df = 100$, $p = .00$, CFI = .91, RMSEA = .08.

Personality. Big Five personality traits were measured with a Dutch 224-item personality questionnaire (G5R; Oostrom, Born, Serlie, & Van der Molen, 2010) which was administered by the hiring organization as part of the selection procedure. An example item for Conscientiousness is '*Strictly follows the rules'*. Construct validity and reliability of the scales were judged as sufficient for personnel selection by the Dutch Test Committee of the Dutch Psychological Association COTAN. Furthermore, the scales of the personality questionnaire correlated substantially ($r = .49 - .70$) with scales of the NEO-PI-R which were intended to measure similar constructs (Costa & McCrae, 1992). Reliabilities (alphas) are substantial for Extraversion (.92), Agreeableness (.85), Conscientiousness (.93), Neuroticism (.90), and Openness to experience (.90).

Results Study 2

Descriptive statistics, correlations, and internal reliabilities of all study variables are presented in Table 2. Gender and ethnicity were significantly correlated ($r = .22$, $p = .03$), indicating that there were more ethnic minority women in our sample than ethnic minority men.

Hypothesis 1, on applicant perceptions, was tested with one-sample t-tests. Similar to Study 1, we compared perceptions of the asynchronous job interview (Table 2) with the average perception score in Anderson et al.'s (2010) category of favorably evaluated selection instruments. In contrast to our hypothesis, perceptions of fairness ($M = 2.40$, $SD = 0.71$), face validity ($M = 2.88$, $SD = 0.79$), predictive validity ($M = 1.93$, $SD = 0.54$), and opportunity to perform ($M = 1.95$, $SD = 0.72$) were significantly lower than the average perception scores of the favorably evaluated instruments (all p's $= .000$). Furthermore, predictive validity perceptions of the asynchronous job interview were even lower than the average perception score of the least preferred instruments ($M = 2.05$, $t = -2.28$, $p = .02$).

Hypothesis 2, on Extraversion, was partly supported. Extraversion related positively to perceptions of video applications. Yet, only the relationship between Extraversion and the opportunity to perform in video applications was significant ($r = .32$, $p = .03$).

In Hypothesis 3 an interaction effect between Neuroticism and Extraversion was proposed. This hypothesis was tested with hierarchical regression analyses (similar to Study 1). No support was found for an interaction effect (e.g., Test fairness: $\beta_{Interaction} = .20$; $p = .22$, F $[6, 38] = 1.35$, $p = 0.26$; Opportunity to perform: $\beta_{Interaction} = .01$; $p = .95$, $F [6, 38] = 1.75$, $p = 0.14$). Thus, Hypothesis 3 was not supported.

Discussion Study 2

The actual applicants in Study 2 perceived the fairness and procedural justice of the video application as negative: All scale means were below 2.88 on a 5-point Likert-scale. Interestingly,

applicant perceptions of the video application were influenced by applicants' personality. Again, extraverted applicants perceived more opportunity to perform compared to introverts. In this video application the applicants had to answer a pre-defined set of questions and they had to make a statement within a limited amount of time. These restrictions may account for the generally negative perceptions of the asynchronous job interview in this study. Lastly, as in Study 1, no support was found for the hypothesized trait interaction within the sample of actual applicants.

General Discussion

Organizations are adopting multimedia applications in the first selection stage at a fast pace. An important theme in the adoption of multimedia techniques in recruitment and selection is their acceptability by applicants. The present study shows that applicant perceptions of the video application were favorable among MTurk participants (Study 1), but unfavorable among actual applicants (Study 2). In addition, the present study provides insight into why applicants react more positively to certain multimedia techniques but less so to others. In both studies, extraverts perceived video applications, in which they can audibly and visually present themselves, more positively than introverts.

Theoretical and Practical Implications

Our most important theoretical implication pertains to the study design. Although a considerable part of the applicant reaction studies use descriptive designs (Hausknecht et al., 2010), the present study corroborates the finding of Marcus (2003) that using short test descriptions in applicant perception research cannot be used as valid proxies for real test experiences. Surprisingly, current meta-analyses on applicant reactions (Anderson et al., 2010; Hausknecht et al., 2004) did not test the moderating effects of study design on mean favorability

ratings. However, Hausknecht et al. (2004) did note that correlations differed between authentic and hypothetical study designs in almost half of the relations examined. Drawing from previous research comparing pretest and posttest reactions (e.g., Chan & Schmitt, Sacco, & DeShon, 1998; Oostrom, Bos-Broekema, Serlie, Born, & Van der Molen, 2012), our findings can be explained by a difference in the underlying causes of the applicant reactions measured in the two settings. Previous research has demonstrated that pretest reactions (measured after participants have been presented with a description of the test or several sample test items; as in Study 1) are affected by prior test experiences and beliefs in tests, whereas posttest reactions (measured after participants have completed the test; as in Study 2) are affected by (perceived) test performance. Accordingly, our study showed that the principle idea of the use of video interviews seems to be accepted, whereas people who are actually confronted with video interviews react negatively. An alternative explanation for the differences in mean favorability ratings in our two samples could be the low vs. high stakes context. The applicants in Study 2 had a lot more at stake than the MTurk participants in Study 1 and may therefore have been more sensitive to the types of selection instruments used during the selection process. Indeed, previous studies have shown that selection process characteristics have a different effect in a lab vs. an actual selection context (e.g., Truxillo, Bodner, Bertolino, Bauer, & Yonce, 2009).

Second, our results among actual applicants render support to Brockner et al.'s (2001) argument that the less familiar an applicant is with a certain selection procedure, the less legitimate the procedure will appear. Research has also shown that selection procedures requiring face-to-face interaction are not so easily replaced by technology, such as in online interviews (Blacksmith et al., 2016; McCarthy et al., 2017; Straus, Miles, & Levesque, 2001). Our findings suggest that this can even be extended to digitization of the first phase of selection

procedures, in which asynchronous job interviews tend to be used. We hypothesized that adding media richness to this first stage, in which traditionally only text-based communication was used, would lead to more favorable applicant perceptions. It seems, however, that actual applicants do not value this opportunity to add more information in the early selection stage in which usually only asynchronous instruments are used. This was even the case when applicants were informed by the hiring organization that the asynchronous job interview would be followed by an actual face-to-face interview in the second selection hurdle (Study 2).

Third, perceptions were influenced by applicants' Extraversion in both studies: Extraverted applicants perceived more opportunity to perform with video applications compared to introverts. Because video applications appeal strongly to presentation skills and offer increased social bandwidth, compared to other instruments that are often used in the pretesting phase, such as motivation letters and resumes (Potosky, 2008), it may be that video applications particularly appeal to highly extraverted applicants. Recruiters should be aware of this finding. It might be an advantage in particular cases, when social skills are considered as important for the job. When Extraversion is not a relevant trait for future job performance, recruiters might want to reconsider using video applications. Applicant preferences may also have consequences for the applicant pool and hiring decisions, such as a possible tendency to self-select out among introverted applicants, or a possible benefit among extraverted applicants from the use of video applications (i.e., they may be more comfortable with expressing and presenting themselves though a video message).

Lastly, we used a person-centered approach, based on trait interactions, to explain applicant reactions to asynchronous job interviews. Earlier research asserted that applicants with a combination of high scores on Neuroticism and low scores on Extraversion rated a selection

process as less fair compared to applicants who did not have this profile. No evidence was found for a trait interaction in our two studies. For the other personality dimensions some significant results were found with regard to applicant perceptions, but not in a consistent way. It seems that, with an exception for Extraversion, personality has a weak effect on applicant perceptions.

Limitations and Suggestions for Further Research

The studies described here are not without limitations. Our findings based on the short description used in Study 1 cannot be generalized to applicant samples. Thus, study setting seems to be an important moderating variable that should not be overlooked in future applicant reaction studies. When examining such moderation effects, study design effects (descriptions vs. actual experiences) should be disentangled from study context effects (low stakes vs. high stakes). Future research should also focus on further explaining the negative applicant perceptions, particularly as found among the actual applicants, by examining which aspects of the asynchronous job interview caused these negative applicant reactions (e.g., the content, the medium, the information provided in advance, the number of chances to record). Future research may also further explore the role of perceived uneasiness or 'creepiness' when applying with asynchronous job interviews as an explanation for the unfavorable applicant reactions that were found in the studies presented here (cf. Langer et al., 2017). The field may advance from studying applicant perceptions of test combinations (Rosse, Miller, & Stecher, 1994). As far as we know, research on applicant perceptions has mostly compared instruments directly (see for example the meta-analysis by Anderson et al., 2010). Selection instruments, however, are often used in combination (e.g., video applications are used as an addition to written resumes instead of a replacement). Future research may therefore ask about applicant perceptions of such

combined instruments, because the applicant perceptions of a combined procedure may actually be higher than perceptions of the instruments separately.

Although we urge for replication in other, larger datasets, we believe that these two studies are relevant for the field of applicant perceptions and new technology for selection because of the paucity of scientific evidence on the use of video applications. Future research could further investigate the validity and potential discriminatory nature of video applications. Furthermore, one could build on the study presented here by using different method and content formats to disentangle the influence of format (e.g., structure), administration medium (e.g., written vs. video), individual differences (e.g., educational level, ethnicity, personality), and order of tests (e.g., counterbalancing vs. not) on applicant perceptions.

Conclusion

With the increased use of multimedia applications, such as video applications, questions arise on their use and fairness. This study is among the first to show that actual applicants considered the video application as rather unfair. Furthermore, the influence of personality appears limited, or at least unclear, when predicting applicant perceptions. An exception can be made for Extraversion which was related to more positive applicant perceptions of asynchronous job interviews in both studies. Given its increased use, an improved understanding of the use of video applications and the role of individual differences in selection procedures is needed to inform practitioners on how to attract and screen for a competitive workforce in a labor market that is rapidly changing due to technological and demographic developments.

References

Anderson, N., Salgado, J. F., & Hülsheger, U. R. (2010). Applicant reactions in selection: Comprehensive meta-analysis into reaction generalization versus situational specificity. *International Journal of Selection and Assessment, 18*, 291-304. doi:10.1111/j.1468-2389.2010.00512.x

Blackburn-Brockman, E., & Belanger, K. (2001). One page or two?: A national study of CPA recruiters' preferences for resume length. *The Journal of Business Communication (1973), 38* (1), 29-45.

Blacksmith, N., Willford, J. C., & Behrend, T. S. (2016). Technology in the employment interview: A meta-analysis and future research agenda. *Personnel Assessment and Decisions 2*, 1-10. doi:10.1111/j.1744-6570.2004.00003

Brenner, F. S., Ortner, T. M., & Fay, D. (2016). Asynchronous video interviewing as a new technology in personnel selection: The applicant's point of view. *Frontiers in Psychology*, *7,* 1-11. doi:10.3389/fpsyg.2016.00863

Brockner, J., Ackerman, G., & Fairchild, G. (2001). When do elements of procedural fairness make a difference? A classification of moderating influences. In J. Greenberg & R. Cropanzano (Eds.), *Advances in organisational justice* (pp. 56-88). Stanford, CA: Stanford University Press.

Bruk-Lee, V., Lanz, J., Drew, E. N., Coughlin, C., Levine, P., Tuzinski, K., & Wrenn, K. (2016). Examining applicant reactions to different media types in character-based simulations for

employee selection. *International Journal of Selection and Assessment*, *24*, 77-91.doi:10.1111/ijsa.12132

Bye, H. H., & Sandal, G. M. (2016). Applicant Personality and Procedural Justice Perceptions of Group Selection Interviews. *Journal of Business and Psychology*, *31*, 569-582. doi:10.1007/s10869-015-9430-9

Central Bureau of Statistics (CBS; 2012). *Beroepsbevolking; behaald onderwijs naar herkomst, geslacht en leeftijd* [Labour force; Educational attainment based on ethnic background, sex and age]. Retrieved from http://statline.cbs.nl

Chan, D., & Schmitt, N. (1997). Video-based versus paper-and-pencil method of assessment in situational judgment tests: Subgroup differences in test performance and face validity perceptions. *Journal of Applied Psychology, 82*, 143-159. doi:10.1037/0021-9010.82.1.143

Chan, D., Schmitt, N., Sacco, J. M., & DeShon, R. P. (1998). Understanding pretest and posttest reactions to cognitive ability and personality tests. *Journal of Applied Psychology, 83*, 471-485. doi:10.1037/0021-9010.83.3.471

Chapman, D., & Webster, J. (2001). Rater correction processes in applicant selection using videoconference technology: The role of attributions. *Journal of Applied Social Psychology*, *31*, 2518-2537. doi:10.1111/j.1559-1816.2001.tb00188.x

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.

Frasca, K. J., & Edwards, M. R. (2017). Web-based corporate, social and video recruitment media: Effects of media richness and source credibility on organizational attraction. *International Journal of Selection and Assessment*, *25*, 125-137. doi:10.1111/ijsa.12165

Gilliland, S. W. (1993). The perceived fairness of selection systems - an organizational justice perspective. *Academy of Management Review, 18*, 694-734. doi:10.5465/AMR.1993.9402210155

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. Retrieved from: www.ipip.ori.org

Hausknecht, J. P., Day, D. V., & Thomas, S. C. (2004). Applicant reactions to selection procedures: An updated model and meta-analysis. *Personnel Psychology, 57*, 639-683. doi:10.1111/j.1744-6570.2004.00003.x

Hall, J. A., & Pennington, N. (2013). Self-monitoring, honesty, and cue use on Facebook: The relationship with user extraversion and conscientiousness. *Computers in Human Behavior, 29*, 1556-1564. doi:10.1016/j.chb.2013.01.001

Hiemstra, A. M. F. & Derous, E. (2015). Video resumes portrayed: Findings and Challenges. In I. Nikolaou & J.K. Oostrom (Eds.), *Employee Recruitment, Selection, and Assessment: Contemporary issues for theory and practice*. pp. 45-61. London: Taylor & Francis.

Honkaniemi, L., Feldt, T., Metsäpelto, R.L., & Tolvanen, A. (2013). Personality types and applicant reactions in real-life selection. *International Journal of Selection and Assessment*, *21*, 32-45. doi:10.1111/ijsa.12015

Kluger, A. N., & Rothstein, H. R. (1993). The influence of selection test type on applicant

reactions to employment testing. *Journal of Business and Psychology, 8*, 3-25.

doi:10.1007/BF02230391

Langer, M., König, C. J., & Krause, K. (2017). Examining digital interviews for personnel

selection: Applicant reactions and interviewer ratings. *International Journal of Selection*

and Assessment, 25, 371-382. doi: https://doi.org/10.1111/ijsa.12191

Laursen, B. P., & Hoff, E. (2006). Person-centered and variable-centered approaches to

longitudinal data. *Merrill-Palmer Quarterly*, *52*, 377-389. doi:

https://doi.org/10.1353/mpq.2006.0029

Lee, I. A., & Preacher, K. J. (2013). Calculation for the test of the difference between two

dependent correlations with one variable in common [Computer software]. Retrieved from:

http://quantpsy.org.

McCarthy, J. M., Bauer, T. N., Truxillo, D. M., Anderson, N. R., Costa, A. C., & Ahmed, S. M.

(2017). Applicant Perspectives During Selection: A Review Addressing "So What?,",

"What's New?," and "Where to Next?". *Journal of Management*, *43*, 1693-1725.

doi:10.1177/0149206316681846

Nikolaou, I., & Oostrom, J. K. (Eds.). (2015). *Employee Recruitment, Selection, and Assessment:*

Contemporary Issues for Theory and Practice. London: Taylor & Francis.

Oostrom, J. K., Born, M. Ph., Serlie, A. W., & Van der Molen, H. T. (2010). Effects of

individual differences on the perceived job relatedness of a cognitive ability test and a

multimedia situational judgment test. *International Journal of Selection and Assessment, 18*, 394-406. doi:10.1111/j.1468-2389.2010.00521.x

Oostrom, J. K., Bos-Broekema, L., Serlie, A. W., Born, M. Ph., & van der Molen, H. T. (2012). A field study of pretest and posttest reactions to a paper-and-pencil and a computerized in-basket exercise. *Human Performance, 25*, 95-113. doi:10.1080/08959285.2012.658928

Potosky, D. (2008). A conceptual framework for the role of the administration medium in the personnel assessment process. *Academy of Management Review, 33*, 629-648. doi:10.5465/AMR.2008.32465704

Richman-Hirsch, W., Olson-Buchanan, J., & Drasgow, F. (2000). Examining the impact of administration medium on examinee perceptions and attitudes. *Journal of Applied Psychology, 85*, 880-887. doi10.1037//0021-9010.85.6.880

Rosenberg, J., & Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. *Journal of Computer-Mediated Communication, 17*, 1-18. doi:10.1111/j.1083-6101.2011.01560.x

Rosse, J. G., Miller, J. L., & Stecher, M. D. (1994). A field study of job applicants' reactions to personality and cognitive ability testing. *Journal of Applied Psychology*, *79*(6), 987-992.

Ryan, A. M., & Ployhart, R. E. (2000). Applicants' perceptions of selection procedures and decisions: A critical review and agenda for the future. *Journal of Management, 26*, 565-606. doi:10.1177/014920630002600308

Shao, G. (2009). Understanding the appeal of user-generated media: A users and gratification perspective. *Internet Research, 19*, 7-25. doi:10.1108/10662240910927795

Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences, 54*, 402-407. doi:10.1016/j.paid.2012.10.009

Smither, J. W., Reilly, R. R., Millsap, R. E., Pearlman, K., & Stoffey, R. W. (1993). Applicant reactions to selection procedures. *Personnel Psychology, 46*, 49-76. doi:10.1111/j.1744-6570.1993.tb00867.x

Straus, S. G., Miles, J. A., & Levesque, L. L. (2001). The effects of videoconference, telephone, and face-to-face media on interviewer and applicant judgments in employment interviews. *Journal of Management, 27*, 363-381. doi:10.1016/S0149-2063(01)00096-4

Truxillo, D. M., Bodner, T. E., Bertolino, M., Bauer, T. N., & Yonce, C. A. (2009). Effects of explanations on applicant reactions: A meta□analytic review. *International Journal of Selection and Assessment, 17*, 346-361. doi:10.1111/j.1468-2389.2009.00478.x

Wilson, K., Fornasier, S., & White, K. M. (2010). Psychological predictors of young adults' use of social networking sites. *Cyberpsychology Behavior and Social Networking, 13*, 173-177. doi:10.1089/cyber.2009.0094

Table 1.

Means, Standard Deviations, and Correlations of Study Variables for the Panelists (Study 1)

	M (SD)	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	39.04 (10.76)	--											
2. Gender	1.49 (0.53)	.23**	--										
3. Multimedia	4.09 (1.05)	-.25**	-.11	--									
4. Extraversion	2.88 (0.94)	-.13	-.11	.15	(.93)								
5. Agreeableness	3.79 (0.72)	.21**	.23**	.03	.26**	(.89)							
6. Conscientious	3.92 (0.66)	-.01	.01	.20*	.17*	.26**	(.87)						
7. Neuroticism	1.38 (0.95)	.06	.11	-.22**	-.37**	-.38**	-.46**	(.94)					
8. Openness to experience	3.80 (0.66)	-.03	-.04	.11	.34**	.27**	.33**	-.25**	(.84)				
9. Test fairness	3.53 (0.83)	-.16*	-.10	.03	.15	-.04	.08	-.13	.15	(.87)			
10. Face validity	3.61 (0.83)	-.06	-.03	.01	.06	.03	.10	-.13	.11	.80**	(.86)		
11. Predictive validity	3.07 (0.88)	-.14	-.08	.06	.19*	-.03	.10	-.15	.14	.81**	.74**	(.91)	
12. Opportunity to perform	3.33 (0.96)	-.13	-.13	.08	.25**	.11	.19*	-.27**	.26**	.70**	.63**	.77**	(.94)

Note. Reliabilities (alphas) are presented on the diagonal. Gender (1 = male, 2 = female). $N = 160$. * $p < .05$, ** $p < .01$.

Table 2.

Means, Standard Deviations, and Correlations of Study Variables for the Actual Applicants (Study 2)

	M (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	26.27 (4.47)	--												
2. Gender	1.60 (0.49)	-.08	--											
3. Ethnicity	0.21 (0.41)	.15	.22*	--										
4. Multimedia use	4.52 (0.71)	-.06	-.10	-.07	--									
5. Extraversion	3.67 (0.44)	.12	-.09	.06	.02	(.92)								
6. Agreeableness	3.90 (0.27)	.18	-.15	.11	.08	.54**	(.93)							
7. Conscientiousness	4.26 (0.31)	.02	-.09	.08	.14	.40**	.61**	(.93)						
8. Neuroticism	1.20 (0.37)	.03	.16	-.20	-.03	-.43**	-.43**	-.50**	(.90)					
9. Openness to experience	3.96 (0.26)	.02	-.21	.26	.04	.39**	.63**	.41**	-.53**	(.90)				
10. Fairness	2.40 (0.71)	-.10	-.02	-.06	-.13	-.01	-.28	-.28	.16	-.25	(.76)			
11. Face validity	2.88 (0.79)	.06	.08	-.02	-.06	.10	-.31*	-.20	.18	-.22	.68**	(.77)		
12. Predictive validity	1.93 (0.54)	-.06	-.04	.02	.00	.13	-.15	-.11	.14	-.24	.63**	.50**	(.71)	
13. Opportunity to perform	1.95 (0.72)	.04	-.02	.10	-.09	.32*	.00	-.12	.04	-.12	.64**	.53**	.57**	(.87)

Note. Reliabilities (alphas) are presented on the diagonal. The variables are coded as follows: Gender (1 = male, 2 = female), Ethnicity (0 = Western ethnic majority, 1 = non-Western ethnic minority). $N = 103$, except for personality ($n = 45$). * $p < .05$, ** $p < .01$.