



## Full length article

## Are they accurate? Recruiters' personality judgments in paper versus video resumes

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## ABSTRACT

Whether recruiters accurately infer personality from resumes is currently a topic of great interest in the light of technological advancements and new types of resume formats (like video resumes) that are increasingly being used. Based on predictions from the realistic accuracy model and the media richness theory, we investigated whether real recruiters ( $N = 296$ ) are able to infer applicants' Big Five personality characteristics more accurately from video and audio resumes than from less information-rich resume formats (like paper resumes) and whether applicants' perceived attractiveness (physical/vocal) affects accuracy judgments. As expected and with the exception of extraversion, personality was not accurately judged from paper resumes. Interestingly, information-rich resume formats and applicants' perceived attractiveness did not affect accuracy judgments. Despite recruiters' stubborn reliance on their capacity to infer personality from resume information, study findings clearly showed that different types of resumes –also the new, more information-rich ones– are no valid tools to infer candidates' personality from.

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## 1. Introduction

Worldwide, resumes are one of the most frequently used selection tools by both applicants and recruiters and are even used more frequently than any other assessment tool (Piotrowski & Armstrong, 2006; Steiner, 2012). Due to technological developments, new types of resumes, such as the so-called video resumes, emerged and became increasingly popular (Hiemstra, Derous, & Born, 2015; Oostrom, van der Linden, Born, & van der Molen, 2013). Video resumes are short video-taped messages (less or about 2–3 min) in which applicants present themselves to recruiters or potential employers and elaborate on their competencies, qualifications and previous work experiences (Gissel, Thompson, & Pond, 2013; Hiemstra, Derous, Serlie, & Born, 2012). By using video resumes, applicants can distinguish themselves more from the applicant pool and are more able to show off their personality, talents or motivation towards a job.

Paper and video resumes do share similarities. Much like paper resumes, video resumes present candidate information in an

asynchronous way, meaning that the recruiter/employer can view the resume information at any place and point in time. Video resumes also differ from paper resumes, in that they provide more and different cues to recruiters, like visual and auditive information about the applicant. However, these more differentiated cues in video resumes also consist of non-job relevant information, like for example applicants' attractiveness.

This paper investigates the impact of different resume formats on recruiters' judgments about applicants' personality. Although not intended to be a psychological test, recruiters still infer other types of information than biographic information from resumes, such as applicants' personality, to base hiring decisions upon (Burns, Christiansen, Morris, Periard, & Coaster, 2014; Cole, Feild, Giles, & Harris, 2009). For recruiters, personality is an important construct to infer from applicants, because personality has strong predictive validity in predicting overall job performance and job-related behaviors (Sackett, Lievens, Van Iddekinge, & Kuncel, 2017). Personality measurements also possess incremental validity up and beyond intelligence measures (Schmidt & Hunter, 1998). Assessing personality of an applicant can therefore provide additional information to recruiters, which can help them make the best choice in recruiting and selecting an applicant.

However, whether recruiters are able to accurately infer

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personality from resumes, is still an open question and much debatable (Cole, Rubin, Feild, & Giles, 2007). Research into this topic is rather scarce and has mostly focused on paper resumes. Yet, due to recent technological developments—such as the emergence of video resumes—, this research theme has received more attention (Hiemstra et al., 2015).

Because accurate judgments are quintessential in recruitment and personnel selection, this paper aims to advance insights on recruiters' *accuracy of personality inferences from resume information*. Based on the realistic accuracy model (Funder, 1995; 2001), this paper first discusses the way recruiters process resume information and whether accurate personality inferences from resumes are possible. Second, inspired by media richness theory (Daft & Lengel, 1986), we examine whether *information richness* affects accuracy of personality inferences. It has been shown that raters infer targets' personality in a different way from paper resumes than from video-based resumes (Waung, Hymes, & Beatty, 2014), which are considered to be higher in information richness. However, it is unclear whether resume format also affects *accuracy of personality inferences*, which touches upon the essence of screening. Last, we explore the influence of non-job relevant resume information—like perceived applicants' attractiveness—on accuracy judgments. Because applicants' attractiveness (both physical and vocal) becomes more salient in information-rich resumes than in paper resumes, it is still much debated whether this (perceived) attractiveness can impact recruiters' personality judgments, and especially the accuracy of such judgments.

Below, we discuss the theoretical background of the study. First, we discuss different resume formats, followed by a discussion of the realistic accuracy model, which is applied to the context of resume screening. Then, we touch upon the effects of information richness of resume formats on accuracy of personality judgments. We end the literature review by discussing the relation between (perceived) attractiveness and accuracy judgments.

## 2. Theoretical background

### 2.1. Resume format and accuracy

#### 2.1.1. Resume formats

Many recruiters select applicants by the 'classic trio' of resumes, letter of reference, and the interview. Of this 'trio', resumes are the first tool to get to know applicants. Typically, resumes are paper credentials that consist of biographic information, which also seems to be used by recruiters to make attributions about applicants' soft skills (like interpersonal skills, leadership abilities or motivation) and even their personality (Brown & Campion, 1994; Burns et al., 2014; Cole, Feild, & Giles, 2003). For instance, Cole et al. (2003) showed that resume items referring to applicants' work experiences correlated negatively with applicants' agreeableness, and items on academic achievements correlated positively with applicants' presumed conscientiousness. More recently, Burns et al. (2014) also showed that people connect certain cues in resumes (like experience, type of education, and resume format) to applicants' personality and even hirability. However, whether recruiters can also *accurately* infer personality characteristics from items on paper resumes, is not investigated (for an exception: Cole et al., 2009).

Indeed, most studies on resume evaluations only consider 'paper credentials'. Yet, recent developments in technology and multimedia present new opportunities and implications for personality inferences based on resume screening. New formats such as video resumes have emerged and are increasingly popular in both Europe and the United States (Hiemstra & Derous, 2015; Silverman, 2012), urging for more research. More specifically, a

literature search in Web of Science and conference proceedings (February, 2017) showed that since 2010, there have only been 12 studies written on the subject of video resumes. Of these 12 studies, six were written in the last four years, indicating that there is growth in researchers' attention to video resumes. However, this growth in research is still limited and rather disproportionate when one compares this to the growth of use of video resumes in practice. For example, according to a survey in June 2011, 174.000 hits were found on the popular website YouTube for the keyword video resume (Gissel et al., 2013). By February 2017, this number increased to 5.53 million hits. Indeed, studies have already mentioned that the technique is popular among practitioners (Hiemstra & Derous, 2015; Hiemstra et al., 2015; Nguyen & Gatica-Perez, 2016; Waung, Hymes, Beatty, & McAuslan, 2015). Yet the subject of video resumes is little explored in research (Ryan & Derous, 2016), and therefore considered here.

Video-based resumes, may vary in format. In a more narrow sense, the video resume is a verbal report of the candidate's biographical information (previous education, relevant work experience and extra-curricular activities), which is comparable to the written biographical information in paper resumes (Cole et al., 2007). In a more broad sense, video resumes may allow job applicants to demonstrate their knowledge, skills, abilities and other characteristics, such as motivation and career objectives, hence resembling more a videotaped job interview and work sample test than a paper resume (Hiemstra & Derous, 2015).<sup>1</sup> Video resumes differ from paper resumes in that they consist of more varied and richer cues, and hence, can grant applicants the opportunity to present themselves more naturally. Compared to paper resumes, recruiters can base their personality assessment on more cues as well as different kinds of cues (e.g. verbal, non-verbal behavior). Whether this leads to more accurate judgments of personality is a point of interest in the realistic accuracy model (Funder, 1995; 2001) and the information richness theory (Daft & Lengel, 1986), which are discussed next.

#### 2.1.2. The realistic accuracy model

A model that describes when and how it is possible to form accurate judgments about a target individual is the 'realistic accuracy model' (RAM; Funder, 1995, 2001). According to the realistic accuracy model, a target's personality can be judged accurately if (1) *relevant information* (e.g. personality traits) can be detected from (2) a clearly *available* context (e.g. questionnaire with sufficient personality items), (3) this information is *detected* by a rater (e.g. the rater is able to work with personality questionnaires) and (4) if this information is *interpreted correctly* (e.g. the rater has adequate knowledge and capabilities to interpret results of a personality questionnaire) (Funder, 2001). The first two elements, relevance and availability, are environmentally-based cues and can be influenced by the ratee, while the other two elements, detection and interpretation, are more person (rater) based.

**2.1.2.1. Relevance: personality traits.** When applied to the context of resume screening, the first element of the model, *relevance*, handles the question whether personality traits can be assessed from resume information. Waung et al. (2014) give an overview of resume cues (both in paper and video resumes) linked to Big Five personality traits. For example type and number of extracurricular activities are a cue for assessing extraversion, while volunteerism

<sup>1</sup> In this study we consider video resumes in a narrow sense. Such video resumes (also referred to as 'talking resumes') differ considerably from paper resumes in that they use a multimedia format that also presents vocal/verbal and visual/non-verbal information of the applicant.

and fluency in foreign languages are indicators of openness. In video resumes, professional dress and good posture are related to conscientiousness and a friendly voice, smiling and eye contact are signals for higher agreeableness. Hence, empirical research does show that recruiters use resume information to infer personality (Burns et al., 2014; Cole et al., 2003).

However, inferring personality based on these resume cues does not necessarily mean that personality can be assessed accurately. In this regard, several studies have shown that accuracy judgments are rather low and depending on which personality trait is being assessed (Funder & Sneed, 1993). In a study by Cole et al. (2009), paper resumes were offered to 244 recruiters and the reliability and validity of Big Five personality inferences was explored. Except for extraversion, Cole et al. (2009) found the reliability and validity of personality inferences to be generally low. Similar findings have been reported in related screening situations (like the interview). Carney, Colvin, and Hall (2007) and Schmid Mast, Bangerter, Bulliard, and Aerni (2011) found that extraversion was rated more accurate compared to the other Big Five personality traits. Therefore, one can expect accuracy judgments from resumes to be rather low in general, with the exception of extraversion. In line with these findings, we expect that:

**Hypothesis 1.** Inferring applicants' personality from resumes (regardless of resume format) will lead to overall low to moderate accuracy judgments except for extraversion, which will receive the highest accuracy judgments.

**2.1.2.2. Availability: information richness.** The second element of the realistic accuracy model (Funder, 1995; 2001) discusses the impact of *available* information. According to Funder (2012), both the quantity and the quality of information is important to reach accurate judgments. When *more information* becomes available, the chances of accuracy in judgments grow. Also, when *richer information* is present, accurate judgments are more likely to occur. According to Daft and Lengel's (1986) media richness theory, types of media differ from one another in terms of 'information richness'. A combination of four factors leads to a continuum of information richness, on which different types of media can be placed. These factors are (a) *Capacity for immediate feedback*, which refers to immediate reactions between sender and receiver in a communication process, like in two-way communication patterns (e.g., synchronous), (b) *Number of cues and channels*, that deal with text, sound or image which can be transmitted through the medium, (c) *Personalization*, which is the ability to convey a sense of personal focus, and (d) *Language variety*, which means whether the medium allows for the use of simple language versus complex language (like in complex speech).

Different types of resume formats can be placed on this continuum. *Both paper and video resumes* are low in their capacity for immediate feedback as they are presented in an asynchronous way. Further, in *paper resumes*, the most common cues appear in written text. *Video-taped resumes*, however, convey a multiplicity of cues. Video-taped resumes show both verbal and nonverbal behaviors and transmit voice and intonation of a person (i.e., paraverbal information). Video resumes also allow the expression of one's personal feelings and the use of complex language, compared to paper resumes. Consequently and according to the media richness theory, video resumes score higher in information richness than paper resumes.

To investigate differential effects of resume formats (like video vs. paper) on the tool's validity, one should be able to disentangle specific method factors or features in resume formats (i.e., 'building block' procedure; Lievens, De Corte, & Westerveld, 2014). Video resumes differ from paper resumes in that they present auditive

and visual cues. A resume format that is situated in between video and paper resumes on the media richness continuum, is the '*audio resume*'. Audio resumes are audio fragments in which the applicant shares relevant information like biodata (e.g., education or experience). While the content might be identical to the content of video/paper resumes, audio resumes do not contain any visual cues as in video resumes. However, contrary to paper resumes, recruiters can still make judgments based on auditive cues, like voice or accent (Purkiss, Perrewé, Gillespie, Mayes, & Ferris, 2006). Hence, comparing paper and video resumes to audio resumes (while keeping the core message identical) allows to further disentangle effects of media richness of resume formats on accuracy of personality inferences. In sum, based on previous arguments, video resumes are considered highest in information richness, followed by audio resumes and paper resumes, respectively, which may differently affect the accuracy of applicants' personality judgments.

In general, more varied behavioral cues should give rise to more accurate judgments (Funder, 2012). For instance, in a study by Schmid Mast et al. (2011), recruiters and students watched pre-recorded video clips of applicants. In these videos, applicants shortly presented themselves and answered three fixed questions. These authors concluded that people (both laypersons and recruiters) were able to form valid personality inferences about others, even after a brief observation (<5 min) based on a short video-taped presentation of the applicant.

Building on the media richness theory, information-rich resume formats (like video and audio resumes) should result in more accurate estimates of an applicant's personality when compared to less information-rich formats (like paper resumes). Although we are not aware of any study assessing accuracy of personality judgments from video-based resumes, some indirect support for this assumption has been reported. Chapman and Webster (2001), for instance, investigated whether accuracy judgments of applicants depended on interview format. They found that videoconferencing (i.e., being lower in information richness) led to more external attributions and inflated scoring of applicants, hence less accurate scoring, when compared to face-to-face interviews (i.e., being higher in information richness).

Wang et al. (2014) were among the first to investigate personality inferences based on paper and video resumes. They compared how mock applicants were judged by undergraduate psychology students on Big Five personality traits and concluded that paper resumes led to significantly higher scores for extraversion and significantly lower scores for agreeableness, compared to video resumes. However, Wang et al. (2014) did not consider the accuracy of these personality judgments.

Because studies already showed that the screening of resumes low in information richness (like paper resumes) have led to inaccurate personality inferences (Cole et al., 2009), we further investigate whether resumes *higher* in information richness (like audio and video resumes respectively) might benefit from additional cues and might lead to more accurate judgments compared to resumes lower in information richness, like paper resumes (keeping content equal). Borkenau and Liebler (1992) investigated consensus between strangers' personality judgments based on conditions with varying information richness. Consensus was highest when judges rated personality in the video-condition (with sound), followed by conditions of video without sound, audiotape and still image of the judged person.

Note however that much like in paper resumes, accuracy judgments might also depend on the type of trait under investigation. For instance, based on 5-min videotapes of college students having a get-acquainted conversation, Carney et al. (2007) found that extraversion was most accurately assessed, while agreeableness and

openness were judged least accurate. Schmid Mast et al. (2011) further showed that extraversion was rated most accurately when raters evaluated applicants' Big Five personality judgments from video-taped interviews, while agreeableness and neuroticism were judged inaccurately. Following these findings and based on assumptions from media richness theory, we expect that:

**Hypothesis 2.** Applicants' personality (particularly extraversion) is more accurately assessed in resumes highest in information richness (video resumes), followed by resume formats that are lower in information richness (audio and paper resumes, respectively).

## 2.2. Resume format, perceived attractivity, and accuracy

The first two hypotheses of this study are based upon the first two elements of the realistic accuracy model (Funder, 1995; 2001); relevance and availability. It was stated before that these elements are more environmentally-based cues that are under the influence of the ratee (i.e., applicant), while the other two elements, detection and interpretation, are more rater-based (i.e., recruiter). Yet, of particular importance to the study of accuracy of resume-screening—and new formats like video resumes in specific—is *how recruiters* process resume information. Recruiters might detect and interpret certain types of information differently in paper versus video resumes. For example, some information becomes more salient in information-rich media, such as applicants' look and appearance (Hiemstra & Derous, 2015). Numerous studies have shown that perception of attractiveness positively affects judgments of applicants (see Dipboye, 2005 for a review). Regardless of actual test scores, applicants' perceived attraction has been linked to higher scores on social competence, extraversion, and agreeableness, and attractive applicants are even seen as more intelligent (Luxen & Van de Vijver, 2006). Hosoda, Stone-Romero, and Coats (2003) indicated that physically attractive individuals are generally favored in terms of job-related outcomes, compared to their less attractive counterparts. Barrick, Shaffer, and De Grassi (2009) further demonstrated that perceived attractiveness had a large impact on interviewers' judgments of applicants, even larger than other impression management tactics. In sum, according to the 'what is beautiful is good' principle (Eagly, Ashmore, Makhijani, & Longo, 1991), applicants' perceived attractiveness may lead to more positive impressions and evaluations of applicants' competencies and personality (e.g., Hosoda et al., 2003; Luxen & Van de Vijver, 2006).

However, of significance is whether perceived attraction also affects the *validity* (i.e., accuracy) of personality judgments, which is a research topic that has been rarely investigated. Lorenzo, Biesanz, and Human (2010) were among the first to address this issue. In their study, newly acquainted participants talked with each other for about 3 min. Afterwards, they were asked to rate the conversation partner's personality and to assess his/her attractiveness. Results supported the 'what is beautiful is good' effect: When participants were perceived as attractive, their personality was inferred more accurately.

Lorenzo et al. (2010) used the realistic accuracy model and explained their results by stating that attractive people provide others with more criterion-relevant cues. Because other people exhibit positive expectations about attractive individuals, these attractive individuals should generally feel more comfortable in social interactions, and hence show more criterion-relevant cues. Secondly, Lorenzo et al. (2010) also posit that raters might pay more attention to attractive people. Consequently, they might be more motivated to detect relevant cues provided by attractive individuals.

Whether the 'what is beautiful is good' effect also counts for accuracy judgments of personality in resume screening, is a

pressing issue. To the best of our knowledge, however, this issue has not been investigated and will be explored here. In line with the realistic accuracy model, one can expect positive effects of recruiters' perceived attractiveness of the applicant on the accuracy of their personality judgments. Specifically, resume formats high in information richness *will likely be more prone* to such attractiveness effects than resume formats low in information richness for the mere fact that attractiveness is more difficult to infer when fewer visual cues are available or when such cues are less salient (as in pictures on resumes). Given the limited empirical findings, we approach this issue in an exploratory way and formulated the following research question:

**Research Question 1a.** Will perceived visual attractiveness lead to more accurate personality judgments in video resumes compared to paper resumes?

Because information-rich media, such as video resumes, combines both visual and vocal cues, one also needs to consider perceived attractiveness of applicants' voices. According to Zuckerman and Sinicropi (2011), an attractive voice is linked to more positive impressions of one's personality. DeGroot and Kluemper (2007) also showed that people with an attractive voice get higher ratings in the selection interview. Vocal attractiveness has been positively linked to the traits of extraversion, conscientiousness and emotional stability and therefore can affect personality judgments of applicants. Moreover, similar to visually attractive people and based on the realistic accuracy model (Funder, 1995; 2001), vocally attractive people might feel more comfortable to provide others with criterion-relevant behavior, and raters might be more interested in vocally attractive targets, leading to an increased attention and more accurate assessments. Hence, if one's voice is regarded as more attractive, the personality of that applicant might be estimated more accurately. This effect could also be more pronounced in the audio resume format, since in that format, inferences can only be based on content and vocal cues. Therefore, the following research question was formulated:

**Research Question 1b.** Will perceived vocal attractiveness lead to more accurate personality judgments in audio resumes compared to video resumes?

## 3. Method and materials

### 3.1. Participants

In total 339 HR professionals, active in the field of recruitment and selection, participated in this study. HR professionals were contacted through the personal, professional network of the researchers and by posting a call to participate in this study at HR groups from the social network site LinkedIn, being the more professional counterpart of social network groups on other social media (like Facebook, see Baker, Bricout, Moon, Coughlan, & Pater, 2013). The final sample consisted of 296 recruiters after excluding those with no experience, very little experience or little experience in resume screening ( $N = 29$ ; based on a 6 point Likert-type scale, with 1 = *no experience*, 2 = *very little experience*, 3 = *little experience*, 4 = *average experience*, 5 = *much experience*, 6 = *very much experience*), those who did not spend sufficient time (<12 min) on answering the questionnaire ( $N = 10$ ) (Meade & Craig, 2012), and those with a non-White/Caucasian background to avoid ethnic biases in resume screening ( $N = 4$ ). Recruiters of the final sample were on average 38.1 years old ( $SD = 11.4$ ) and had 14.9 years of work experience as a recruiter ( $SD = 11.1$ ). There were slightly more female recruiters (59.8%) than male recruiters.



### 3.2. Design and procedure

A between-subjects quasi-experimental design was employed with *resume format* as the independent variable with three conditions (low richness/paper resume; medium richness/audio resume; high richness/video resume) and *accuracy of personality inferences* as the dependent variable. Potential moderator variable was perceived attractiveness of the applicant. Recruiters were randomly divided into three groups, with 97 receiving paper resumes, 100 received audio resumes and 99 received video resumes. They each studied one resume format from four applicants and judged the candidates' personality.

First, experimental materials (e.g., resumes) were developed, and pilot tested ( $N = 70$  participants). Second, recruiters were contacted by e-mail and after having given their informed consent, recruiters received either a paper, an audio or a video resume (random), followed by a personality questionnaire about the applicant. In total, each recruiter saw four different applicants. Subsequently, recruiters rated the attractiveness of the applicant, and filled-out demographics. To prevent eventual priming effects, we counterbalanced the order of questionnaires (per resume format). Below, we describe the development and pilot testing of materials, followed by a description of our measures.

### 3.3. Development and pilot testing of materials

#### 3.3.1. Applicants

First, we selected four target applicants who all had to be average in attractiveness in order not to confound study results (i.e., in this study we investigate *perceived* attractiveness). Specifically, two female and two male applicants were selected, while their age and ethnicity were kept constant (young (<25 year) and White/Caucasian). Applicants were evaluated on 'visual and vocal attractiveness' on a 7-point Likert scale (1 = *very unattractive*; 7 = *very attractive*) in a pilot sample consisting of 70 participants (other than those from the main analyses with age:  $M = 25.4$ ,  $SD = 9.40$ ; gender: 71% female; ethnicity: 100% White/Caucasian). All four applicants were moderate on both visual ( $M = 3.69$ ;  $SD = 1.12$ ), and vocal attractiveness ( $M = 4.15$ ;  $SD = 1.27$ ). Subsequently, for each of these applicants, we developed an audio and video resume based on their original paper resumes (See further: 3.3.2 Resumes).

#### 3.3.2. Resumes

For each of the four target applicants, three resume formats were created (12 in total) based on the applicants' biographic information in their actual paper resumes. Each of the three resume formats considered the same resume items, including applicants' personal information (name, address, telephone number, ...), education, work experience, computer and language skills, and hobbies. Names of both the applicants and companies were changed to guarantee anonymity. To investigate effects of format characteristics on accuracy judgments, we kept the content of the resume formats identical (same resume items/script, consisting of biographical information). Only the format differed: The paper resume included written information (layout of paper resumes was kept identical) and the applicants' pictures, whereas the audio resume consisted of an audio fragment (background noise was eliminated), and the video resume included a pre-recorded video-clip (lightening and background of video-taped messages were kept identical).

### 3.4. Measures

#### 3.4.1. Personality judgments

Personality of the target applicants was measured using the IPIP

Five-Factor Model (1 = *strongly disagree*; 5 = *strongly agree*), consisting of Extraversion ( $\alpha = 0.75$ ), Agreeableness ( $\alpha = 0.79$ ), Conscientiousness ( $\alpha = 0.65$ ), Emotional Stability ( $\alpha = 0.64$ ), and Openness ( $\alpha = 0.68$ ) (Donnellan, Oswald, Baird, & Lucas, 2006). Items were measured on a 5-point Likert scale. Principal axis analyses also showed a five factor-solution explaining 43.32% of the total variance. Personality items were filled-out by the target applicants' acquaintances and the recruiters.

Following studies of Hofstee (1994) and Oh, Wang, and Mount (2011) and to increase the validity of our criterion measure, we asked 10 acquaintances of each applicant to assess the target's personality. Subsequently, we averaged target's personality judgments of these 10 acquaintances of each applicant, to obtain our criterion measure. Hofstee (1994, p. 149) mentioned that an averaged judgment of knowledgeable others provides the best point of reference for assessing someone's personality. We followed this procedure as previous studies have shown that self-reports of personality are subject to response distortion and well-acquainted observers can provide more accurate information about the target person's personality (Oh et al., 2011). We therefore also asked the target applicants' acquaintances how familiar they were with the applicants (1 = *not at all*; 7 = *completely*). Results showed that the applicants' acquaintances were very familiar with the target applicants ( $M = 6.07$ ;  $SD = 1.07$ ) and could be included in the criterion measure. Hence, we obtained 50 personality scores (10 acquaintances  $\times$  5 personality dimensions) for each applicant, which were aggregated per Big Five personality dimension. Aggregated personality dimension scores (further labelled as 'criterion scores') were used as the criterion for comparing the judgments of the recruiters, in order to investigate the accuracy of the applicants' personality judgments, as will be explained next.

#### 3.4.2. Accuracy judgments

Two different perspectives on accuracy prevail, namely a 'prediction' and 'agreement' perspective (Carney et al., 2007). *Accuracy as prediction* refers to the relation between a target person's judgment of a construct (e.g., personality) and the target person's outcomes or attributes that are *different* from that construct (e.g., work performance). This perspective is typically used in predictive validity studies with accuracy reflected in predictive validity coefficients.

The current study, however, investigates whether recruiters can make accurate personality inferences from an applicant's resume (i.e., paper vs. audio vs. video format). Therefore, we consider *accuracy from an agreement perspective* in which accuracy refers to the match between a judge's evaluation of a target person (i.e., recruiter) and that target person's evaluation of the *same construct* (e.g., extraversion). More specifically, accuracy is defined as the relation between recruiters' judgments of a trait (e.g., extraversion) and the target applicant's criterion scores on the same trait (Carney et al., 2007). The higher the match (i.e., more agreement) between recruiters' evaluation of applicants' personality traits and applicants' scores on the same personality traits (i.e., criterion scores), the more accurate recruiters' judgments are considered.

Following McCrae (2008), we subsequently calculated the ICC<sub>DE</sub> –intraclass correlation double entry– to obtain a measure of agreement between criterion scores and recruiters' judgments of personality, resulting into an index of accuracy between the applicants' personality and the recruiters' judgments. McCrae (2008) compared different measures of profile agreement and concluded that both at the factor level as well as at the facet level, ICC<sub>DE</sub> was superior to other measures, such as Pearson's  $r$ , or Cattell's  $r_p$ . ICC<sub>DE</sub>-scores are interpreted as Pearson's  $r$ , but are measured differently. Raw trait scores from (1) criterion scores and (2) recruiters were used as the basis of measuring the ICC<sub>DE</sub>'s. ICC<sub>DE</sub>'s were calculated

**Table 1**  
Descriptive statistics, reliability and correlations among study variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Extraversion	0.20	0.44	0.75										
2. Agreeableness	0.15	0.48	0.26**	0.79									
3. Conscientiousness	−0.33	0.41	0.11	0.11	0.65								
4. Emotional Stability	0.06	0.40	0.01	0.19**	0.11	0.64							
5. Openness	−0.35	0.38	0.23**	0.47**	0.07	0.26**	0.68						
6. Visual attractiveness <sup>a</sup>	3.04	0.40	0.02	0.05	0.02	0.05	0.08	0.87					
7. Vocal attractiveness <sup>a</sup>	2.95	0.54	0.02	0.11	−0.01	−0.01	−0.06	0.59**	0.92				
8. Age of recruiter (years)	38.07	11.39	−0.08	−0.07	0.09	0.04	−0.11	0.05	0.01	—			
9. Recruiting experience	14.90	11.14	−0.08	−0.04	0.09	0.06	−0.09	0.06	0.03	0.97**	—		
10. Gender of recruiter <sup>b</sup>	1.60	0.49	0.04	0.01	−0.08	0.12*	−0.07	−0.01	0.16*	−0.30**	−0.28**	—	
11. Resume screening experience <sup>c</sup>	5.16	0.79	−0.06	−0.04	−0.01	−0.09	−0.05	−0.06	−0.04	0.11*	0.13**	0.01	—

Note. Means, standard deviations and correlations of Big Five personality traits are calculated based on the ICC<sub>DE</sub>-scores and represent accuracy values.

Please note that upon request of one of the reviewers, correlations were recalculated in order to report applicant-recruiter gender combinations and their correlations with the other variables. A significant correlation ( $r = -0.15$ ,  $p = 0.01$ ) was found between gender of the recruiter and conscientiousness of the male applicant.

\* $p < 0.05$ .

\*\* $p < 0.01$ .

<sup>a</sup> Visual and vocal attractiveness as perceived by the recruiters.

<sup>b</sup> Gender of recruiter: 1 = male; 2 = female.

<sup>c</sup> Resume screening experience: 1 = no experience – 6 = very much experience. Cronbach's alphas are on the diagonal.

for each recruiter, for each Big Five personality trait separately and across our four targets (applicants). This resulted in one accuracy score for each recruiter per personality trait. After each judge's accuracy score for each personality trait was calculated, the ICC<sub>DE</sub>'s (accuracy scores) were transformed into Fisher's-z transformed accuracy scores for normalization issues, on which final analyses were conducted (Haggard, 1958). However, in order to clarify interpretation of the results, non-Fisher transformed ICC<sub>DE</sub>'s are reported in Tables 1–3, which can be interpreted as Pearson's  $r$ .

### 3.4.3. Perceived attractiveness (visual/vocal)

Following Barrick et al. (2009), we measured perceived visual attractiveness with six items. An example item is 'I think this person has an attractive appearance'. Visual attractiveness items were adjusted to measure vocal attractiveness (e.g., 'I think this person's voice is attractive'; 1 = strongly disagree; 5 = strongly agree). Principal axis analyses showed a one-factor solution explaining 51.86% (visual attractiveness) and 79.4% (vocal attractiveness) of the total variance. Cronbach's alphas were 0.87 (visual attractiveness) and 0.92 (vocal attractiveness) (see Table 1).

### 3.4.4. Demographics

Demographics included recruiters' age (open question), gender (male vs. female), and ethnicity (Black, Asian, White/Caucasian, Hispanic). Recruiter experience (in years), and professional experience with resume screening (i.e., resume screening experience: 1 = no experience; 6 = very much experience) were also administered.

## 4. Results

### 4.1. Preliminary analyses

A series of preliminary analyses were conducted to check randomisation of participants over resume formats, counterbalancing of resume formats, and descriptive statistics. First, resume formats did not differ significantly from each other regarding recruiters' age,  $F(2, 293) = 1.25$ ,  $p = 0.29$ , years of recruiting experience,  $F(2, 293) = 1.14$ ,  $p = 0.32$ , and resume screening experience  $F(2, 293) = 0.48$ ,  $p = 0.46$ . Second, counterbalancing of the order of questionnaires did not affect study findings regarding the effects of resume format on personality judgments,  $F(3, 292) = 1.77$ ,  $p = 0.15$ . Finally, descriptive statistics were calculated. Table 1 presents

descriptive statistics, reliability, and correlations among study variables. Extraversion correlated significantly positive with agreeableness ( $r = 0.26$ ) and openness ( $r = 0.23$ ), while emotional stability was also positively related to agreeableness ( $r = 0.19$ ) and openness ( $r = 0.26$ ). Next, agreeableness was positively related to openness ( $r = 0.47$ ). Perceived visual and vocal attractiveness correlated highly ( $r = 0.59$ ). Subsequently, recruiters' gender correlated significantly positive with emotional stability ( $r = 0.12$ ), with vocal attractiveness ( $r = 0.16$ ) and correlated negatively with recruiters' age ( $r = -0.30$ ). Preliminary analyses further showed that recruiters' age, recruiter experience and resume screening experience were no suitable covariates (see Berneth & Aguinis, 2016; Weinfurt, 1995). As a consequence, we did not control for any of these demographic variables in further analyses. Recruiter gender only appeared a good covariate variable for the trait 'emotional stability'.<sup>2</sup>

### 4.2. Main analyses

After we conducted preliminary analyses, a series of analyses of variance were conducted to test the hypotheses. We first expected accuracy of personality inferences from resumes to be rather low to moderate, except for extraversion (Hypothesis 1) and regardless of resume format.<sup>3</sup> In support of Hypothesis 1, the ICC<sub>DE</sub>'s showed moderate accuracy. Although overall personality received an accuracy score of 0.20, there were large differences between the Big Five traits. As we expected, extraversion was assessed most accurate, receiving an accuracy index of 0.20, followed by agreeableness ( $r = 0.15$ ), while conscientiousness and openness were inferred

<sup>2</sup> Results did not change when we performed additional analyses in which recruiter gender was included as a covariate on accuracy judgments of emotional stability,  $F(2, 292) = 0.27$ ,  $p = 0.77$ . Therefore, and for reasons of parsimony, we report the main analyses without controlling for gender.

<sup>3</sup> Upon request of one of the reviewers, additional analyses were conducted to explore rater-ratee (i.e. recruiter-applicant) gender effects on the accuracy of the applicants' personality judgments. Results of these additional analyses showed that for four out of five of the personality traits (i.e., accuracy judgments for extraversion, agreeableness, emotional stability, and openness) and for the overall personality score (i.e., global personality accuracy), no rater-ratee gender interaction effects were found for male and female applicants, respectively. One significant rater-ratee effect was found for the accuracy of conscientiousness judgments of male applicants, only. Specifically, male recruiters in our sample appeared to be somewhat more accurate in assessing conscientiousness ( $M = 0.18$ ,  $SD = 0.99$ ) from male applicants compared to female recruiters ( $M = -0.12$ ,  $SD = 0.98$ ).

**Table 2**

Accuracy of personality judgments per resume format (paper, audio, video).

	$M_{total}$	Resume Format			F-values
		Paper	Audio	Video	
Extraversion	0.20	0.32 <sub>a</sub>	0.03 <sub>b</sub>	0.25 <sub>ac</sub>	$F(2, 293) = 14.26, p < 0.00$
Agreeableness	0.15	0.08 <sub>a</sub>	0.26 <sub>b</sub>	0.11 <sub>ac</sub>	$F(2, 293) = 4.78, p = 0.01$
Conscientiousness	−0.33	−0.39 <sub>a</sub>	−0.22 <sub>b</sub>	−0.38 <sub>ac</sub>	$F(2, 293) = 4.83, p = 0.01$
Emotional Stability	0.06	0.03 <sub>a</sub>	0.09 <sub>a</sub>	0.06 <sub>a</sub>	$F(2, 293) = 0.30, p = 0.74$
Openness	−0.35	−0.32 <sub>a</sub>	−0.39 <sub>a</sub>	−0.35 <sub>a</sub>	$F(2, 293) = 0.42, p = 0.66$
Overall Personality	0.20	0.19 <sub>a</sub>	0.23 <sub>a</sub>	0.17 <sub>a</sub>	$F(2, 293) = 1.44, p = 0.24$

Note. ANOVAS were calculated using Fisher-z transformed ICC<sub>DE</sub>'s for normalization issues. Mean accuracy values were transformed back into ICC<sub>DE</sub>-scores for presentation. These mean ICC<sub>DE</sub>-scores can be interpreted as Pearson's *r*. Resume format accuracy values sharing subscripts in the same row are not significantly different whereas values with different subscripts are ( $p < 0.05$ ).

**Table 3**

Effect of resume format and perceived attractiveness (visual/vocal) on accuracy judgments.

		Perceived Attractiveness			
		Visual		Vocal	
		$F(1, 192)$	$p$	$F(1, 195)$	$p$
Extraversion	Resume Format (A)	0.10	0.75	4.82	0.03
	Perceived Attractiveness (B)	0.38	0.54	0.09	0.77
	(A) X (B)	0.27	0.61	2.38	0.12
Agreeableness	Resume Format (A)	0.64	0.43	0.86	0.36
	Perceived Attractiveness (B)	1.08	0.30	2.57	0.11
	(A) X (B)	0.60	0.44	0.24	0.63
Conscientiousness	Resume Format (A)	0.17	0.68	0.02	0.90
	Perceived Attractiveness (B)	0.10	0.75	0.00	0.95
	(A) X (B)	0.12	0.73	0.40	0.53
Emotional Stability	Resume Format (A)	0.48	0.49	0.18	0.67
	Perceived Attractiveness (B)	0.47	0.50	0.07	0.79
	(A) X (B)	0.49	0.49	0.10	0.76
Openness	Resume Format (A)	1.07	0.30	2.29	0.13
	Perceived Attractiveness (B)	1.28	0.26	0.08	0.78
	(A) X (B)	1.16	0.28	2.78	0.10

inaccurately from resumes ( $r = -0.33$ ;  $r = -0.35$ ). Emotional stability could not be inferred from paper resumes, receiving an accuracy index near zero ( $r = 0.06$ ; Table 2).

**Hypothesis 2** further expected applicants' personality to be assessed more accurately from resumes high in information richness with most accurate judgments for extraversion. ICC<sub>DE</sub>'s across personality traits (i.e., overall personality) did not differ significantly across resume formats ( $r = 0.19$  for paper resumes;  $r = 0.23$  for audio resumes, and  $r = 0.17$  for video resumes;  $F(2, 293) = 1.44$ ,  $p = 0.24$ ). When personality traits were considered separately, significant differences were found between resume formats for extraversion,  $F(2, 336) = 14.26$ ,  $p < 0.00$ ,  $\eta^2 = 0.09$ ; agreeableness,  $F(2, 293) = 4.78$ ,  $p = 0.01$ ,  $\eta^2 = 0.03$ , and conscientiousness,  $F(2, 293) = 4.83$ ,  $p = 0.01$ ,  $\eta^2 = 0.03$  (Table 2). As expected, in the video resume format, extraversion was moderately inferred from resumes ( $r = 0.25$ ), and received the highest accuracy judgment, compared to the other Big Five traits. This was not the case in the audio resume format ( $r = 0.03$ ), where recruiters were not able to assess extraversion accurately. In the audio resume format, recruiters were most accurate in inferring agreeableness ( $r = 0.26$ ). Finally, extraversion was estimated equally accurate from paper resumes ( $r = 0.32$ ) as from video resumes ( $r = 0.25$ ),  $F(1, 194) = 2.14$ ,  $p = 0.15$ . Therefore, no support was found for **Hypothesis 2**.

Finally, we formulated several research questions to investigate whether perceived attractiveness would influence the relation between resume format and accuracy of personality judgments, with visual attractiveness leading to more accurate judgments in the video resume format (compared to paper resume format; **Research Question 1a**), and with vocal attractiveness leading to more accurate judgments in the audio resume format (compared to

the video resume format; **Research Question 1b**). Overall, recruiters perceived the applicants as average in visual attractiveness ( $M = 3.04$ ;  $SD = 0.40$ ), and applicants in the video resume ( $M = 3.08$ ;  $SD = 0.43$ ) and paper resume format ( $M = 3.00$ ;  $SD = 0.35$ ) were perceived as equally attractive,  $F(1, 194) = 1.89$ ,  $p = 0.17$ . The applicants' vocal attractiveness was also perceived as average ( $M = 2.95$ ;  $SD = 0.54$ ). Again, no significant main effects were found for resume format on vocal attractiveness (for audio resume:  $M = 2.96$ ;  $SD = 0.57$ ; for video resume:  $M = 2.94$ ;  $SD = 0.51$ ,  $F(1, 197) = 0.04$ ,  $p = 0.84$ ). A series of ANCOVAs further showed no significant interaction of resume format with perceived visual attractiveness  $F(1, 192) = 0.13$ ,  $p = 0.72$  and perceived vocal attractiveness  $F(1, 195) = 0.00$ ,  $p = 0.99$  (see Table 3 for detailed results per trait). Therefore, it is concluded that the effect of resume format on accuracy of Big Five personality judgments did not depend on perceived attractiveness of applicants.

## 5. Discussion

Previous research has shown that recruiters rely on resumes to get a first impression of applicants' personality (Burns et al., 2014; Cole et al., 2009). Whether recruiters accurately infer personality from resumes is much debated and a topic of great interest, especially in the light of recent technological advancements that have led to the emergence of for example video-based resumes. The present study aimed to advance insights on recruiters' accuracy of personality inferences from resume information. This paper focused on information-rich resume formats. Despite their popularity and many questions that raise regarding the use of video-based resumes, research on the psychometric properties of new tools, like

video-based resumes, is still behind (Hiemstra & Derous, 2015; Lievens & Harris, 2003). The present study aimed to address this gap by experimentally investigating the *accuracy of personality inferences from video, audio and paper resumes*.

Despite recruiters' stubborn reliance on their capacity to infer personality from resume information (Cole et al., 2009), study results clearly evidenced that –with the exception of extraversion and agreeableness– recruiters are unable to accurately infer applicants' personality from resumes. It seemed difficult (if not impossible) to accurately assess emotional stability from resume information. Moreover, conscientiousness and openness were judged wrongly, which predominantly corroborates previous findings by Cole et al. (2009).

Combining the realistic accuracy model (Funder, 1995; 2001) with the media richness theory, one can assume personality judgments to be assessed in a more accurate way if richer/more personalized resume formats are used. Yet, information-rich resumes could not save the recruiter: Overall, Big five personality traits were judged equally (in)accurate across the three resume formats (paper, audio, video), with the exception of agreeableness and conscientiousness on the one hand, which were estimated more accurate in the audio resume format and extraversion on the other hand, which was estimated more accurate from paper and video resumes. Information-rich resumes, like video resumes, did not result into more accurate estimations of (overall/specific) personality traits, perhaps because of the type of message that was conveyed in the video resumes.

Media richness theory posits that media are most effective if they fit the ambiguity level of the message. Information-rich media (like video resumes), therefore, may best be used when the ambiguity of the message is high whereas information-poor media (like paper resumes) can be used when the message is straight-forward and lean. In other words, video resumes might be most effective when applicants have to demonstrate more complex skills and competencies. Indeed, video resumes may considerably vary in content. Most often, video resumes are verbal reports of the candidate's biographical information (previous education, relevant work experience and extra-curricular activities), which is comparable to the written biographical information in paper resumes (Cole et al., 2007). However, video resumes may also allow job applicants to demonstrate their knowledge, skills, abilities, and other characteristics (motivation and career objectives), hence resembling more a videotaped job interview and work sample test than a paper resume (Hiemstra & Derous, 2015).

Interestingly though, recruiters were able to infer extraversion equally accurate from both paper and video resumes. This corroborates with Carney et al. (2007), Cole et al. (2009) and Schmid Mast et al. (2011), and fits with the realistic accuracy model (Funder, 1995; 2001) that regarded extraversion as the personality trait that is most accurately assessable. Barrick, Patton, and Haugland (2000) also found that extraversion, being a more 'visible' trait, should be more easily inferred in a personnel selection context. It seems that in both the paper and the video resume formats, applicants provide recruiters with more criterion-relevant cues related to their level of extraversion compared to other personality traits.

Since new formats (like video resumes) provide more and richer cues to recruiters, we investigated potential effects of non-job related resume information (like perceived applicants' attractiveness) on accuracy judgments of applicants' personality. Studies have demonstrated attractiveness effects on personality assessments (Dipboye, 2005; Lorenzo et al., 2010) mainly in interview settings, but also in resume screening contexts attractive applicants have received more positive personality evaluations (Watkins & Johnston, 2000). However, little is known about effects on

accuracy of judgments and this was investigated here. Our findings did not show effects of visual or vocal attractiveness on accuracy of personality assessments. One particular explanation is in the complex and multidimensional nature of attractiveness. Barrick et al. (2009), for instance, posit that attractiveness is only one component of the self-presentation technique 'appearance' and that such self-presentation techniques are particularly effective in assessment settings like the interview, because appearance is one of the first things an interviewer will likely notice. Hence, it is possible that self-presentation techniques (like visual/vocal attractiveness) work less well in resumes and have less of an impact on resume ratings than on interview ratings. This might particularly be the case if resumes mainly reflect biographic information about candidates, as in our study. When competencies or skills are presented and video resumes resemble more a video-taped interview (Hiemstra & Derous, 2015), much stronger effects of self-presentation tactics could be expected. Hence, the nature of the message (content) should be considered too. The fact that we did not find moderator effects for visual/vocal attractiveness seems to support this assumption. However, it should also be noted that overall attractiveness of the applicants was moderate; maybe stronger effects occur if applicants' attractiveness deviates from the norm (i.e., higher or lower).

Furthermore, visual and vocal attractiveness can be controlled by the applicant, especially in resumes, reflecting 'social desirable' instead of more 'typical' behavior and appearances. According to the realistic accuracy model by Funder (1995; 2001), a target's personality can be judged accurately if s/he shows criterion-relevant behavior (e.g., personality) from a context that the rater can detect and interpret correctly. However, because of the more controlled nature of (video/audio) resumes, applicants can decide what to show (i.e., potentially criterion-relevant cues). This limits recruiters' opportunities to detect and interpret cues in an accurate manner, hence leading to less accurate personality inferences. Taken together, resumes are no personality inventories and even the information-rich formats seem no valid tools to infer personality from.

### 5.1. Strengths, limitations, and further research opportunities

This study is among the first to investigate psychometric properties of video resumes, which are highly popular but still much under-investigated compared to the traditional tools (like paper resumes). To this end, we rigorously developed an experimental study and pilot-tested all materials. For experimental reasons, and following the 'building block' idea, we included an 'audio resume' format (Lievens et al., 2014). Audio resumes may not be used frequently in practice but allow for a better comparison between the different resume formats by disentangling potential differential effects of format characteristics (i.e., vocal/verbal vs. visual/non-verbal cues) on accuracy judgments.

Second, this study was conducted among 296 real recruiters, which we consider as a strength. Indeed, many research into recruitment and selection uses non-professional assessors or student raters (Landy, 2008; Waung et al., 2014). Nevertheless, we employed a scenario study and suggest follow-up research to investigate equivalence of resume formats in high stakes selection situations to enhance the ecological validity of findings.

Third, to be able to investigate format characteristics –and hence, for experimental reasons– we kept the message (or content) of the resumes constant. However, by using 'talking resumes' (i.e., audio and video equivalents of paper resumes) we might have set-up a very conservative test of the accuracy of personality inferences. That is, it might be difficult to infer personality from biographical data, even when more rich media formats are used. Perhaps



personality might be better inferred from video resumes when candidates actually ‘show’ competencies (e.g., switch to another language instead of saying how good your French is). Further research may vary both type of message and content to test potential interaction effects of accuracy judgments with format/media characteristics to a further extent.

Finally, in this study we also controlled for several applicant characteristics that might be prone to categorization effects and biased outcomes, like ethnicity, age or gender (Kroll & Ziegler, 2016). Indeed, recruiters might judge native born applicants in a different way than ethnically diverse applicants particularly if potentially stigmatizing information becomes visible (e.g., when ethnic markers are salient in pictures/video). Future research, therefore, could consider interaction effects of other, more stigmatizing applicant characteristics (like skin colour; physical impairments etc.) with resume format (video, paper, audio) on accuracy judgments.

### 5.2. Theoretical implications

Research into video resumes has not been able to keep up with the rapidly growing interest in practice, also known as the science-practitioner gap (Ryan & Derous, 2016). As illustrated, only 12 papers have been written on this topic the last 10 years, based on a recent literature search from Web Of Science (WOS) and conference proceedings (February, 2017). This paper tried to reduce the gap by investigating questions about the validity of this new instrument, especially by investigating whether video resumes lead to more accurate personality inferences. Lievens and Harris (2003) noticed a lack in theoretical substantiation of existing research regarding new forms of e-recruitment and e-selection and formulated three recommendations. First, they suggested investigating psychometric properties of new e-tools. Resumes are one of the most frequently used selection tools but little is known about the psychometric value of this instrument, especially in the context of personality inferences. Most research into resumes has mainly focused on paper resumes and has mostly studied job suitability or chances of getting invited to a later step in the selection process. This study contributes to research into resume screening and personality inferences by considering the equivalence and validity of traditional (paper) and new (video/audio) resume formats.

Second, Lievens and Harris (2003) also called for a more theoretical approach when investigating new multimedia tools. Considering their suggestion, the present study builds further upon assumptions of both the realistic accuracy model (Funder, 1995; 2001) and the media richness theory (Daft & Lengel, 1986). We mainly focused on the first two elements of the realistic accuracy model: relevance and availability. These two elements are considered to be influenced by the applicant. The other two elements of the realistic accuracy model, detection and interpretation, are more rater-based (i.e., how recruiters perceive and interpret candidate information in resumes). We investigated potential effects of perceived applicants' attractiveness. Future research, however, could consider other potential recruiter effects (e.g., individual difference constructs in judgment accuracy; see De Kock, Lievens, & Born, 2015, or by looking into the interaction of recruiter and applicants' gender; see Cole, Feild, & Giles, 2004).

Finally, Lievens and Harris (2003) suggested addressing questions of practical value, which are further described below.

### 5.3. Practical implications

A number of practical implications can be derived from this study. First, our study findings clearly showed that different types of resumes –also the new, more information-rich ones– are no

valid tools to infer candidates' personality from. Manipulating the format of resumes (paper, audio, video) did not pay off in terms of accuracy of personality inferences. Although video, audio and paper resumes have different wrappings, they may be equally invalid to infer personality from. From a practical point of view, there are ways to improve accuracy judgments. Paper and video formats could be combined in order to increase accuracy, especially for extraversion. Another way of increasing accuracy is by organizing recruiter trainings, to discuss and avert any potential judgmental biases when screening resumes. However, such trainings are time consuming and costly.

A second practical implication states that the focus on resume screening could be moved to a later phase in recruitment and selection. Bateson, Wirtz, Burke, and Vaughan (2013) suggested that companies could reduce their costs and make their selection process even more efficient by using psychometric, online tests as the first screening phase, transferring resumes to a later step.

Third, this study has consequences regarding the discriminatory nature of certain recruitment and selection instruments. The use of new multimedia formats, like video-taped resumes, isn't always warmly applauded by recruiters. Reservations are made given the assumed subjectivity in judging video-based materials vis-à-vis paper credentials and the potential vulnerability to unfairness and discrimination (Anderson, 2011). However, the opposite can also be true. Showing video-taped answers of native versus non-native German applicants, Kroll and Ziegler (2016) found that applicants with non-native background were favored in terms of evaluations. By increasing the amount of available information about applicants (by using video-taped formats like the video resume) discriminatory effects can disappear (Kaas & Manger, 2010). In this study, we took a closer look at effects of information richness in resume screening, related to the perceived attractiveness of applicants, which –to the best of our knowledge– has not been considered, yet. No ‘attractiveness’ effects were found. However, further research is needed that also investigates the interaction between resume format and other applicant characteristics (like applicants from minority groups). Indeed, anonymous resume screening is still advocated in those countries where it is common to attach pictures to resumes (like in many European countries; Krause, Rinne, & Zimmermann, 2012).

Further, based on our study findings, recruiters should be cautious making any personality inferences from resumes, also if video resumes are used. The psychological processes underlying resume evaluation are still unclear. It is still an open question *why and how* recruiters infer personality from resume items. Although some resume information (content-wise) might reflect applicants' personality, recruiters' stubborn reliance on their capacity to accurately infer personality is remarkably and may also be grounded in intuition (Burns et al., 2014; Highhouse, 2008). Instead, we recommend recruiters to use personality questionnaires or any other valid tests (like Situational Judgment Tests) to investigate applicants' personality in a more accurate way, especially for inferring emotional stability, conscientiousness and openness.

Finally, as illustrated, video resumes (and other resume formats) are a tool that is used in recruitment and selection, being the stepping stone of any good HRM policy. Yet, whether people can be judged in accurate ways by others using multimedia devices vis-à-vis traditional devices could be considered as a more broad, overarching question of this study. This question may be equally relevant to many other researchers and practitioners. Indeed, the media richness theory (Daft & Lengel, 1986) has been used often in the area of communication, science information, business, and even advertising. Hence, findings from our study could be illustrative and of practical relevance to these areas. For example, as our results show that information-rich tools do not always lead to better

information transfer, findings might help researchers and practitioners from other fields to determine the context in which information-rich media is used best, or what types of messages could be sent using information rich media tools, in order to optimize information transfer. Hence, with our study, we hope to stimulate more research into this area.

## 6. Conclusion

Resumes are no personality inventories and information-rich resumes do not save the recruiter. Applicants' personality is difficult to assess in an accurate manner, even when information-rich video formats are used.

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