Fairness in Paper and Video Resume Screening

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Fairness van selectie op basis van papieren en video cv's

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General Introduction

Resumes are globally among the most widely used and best accepted instruments to screen applicants (Anderson, Salgado, & Hulsheger, 2010; Piotrowsky & Armstrong, 2006). Although some cultural differences have been reported regarding selection practices (e.g., Huo, Huang, & Napier, 2002; Ryan, McFarland, Baron, & Page, 1999), selection in many countries follows a fairly similar pattern (Cook, 2009), starting with resumes as a form of pre-screening. Recent technological developments have resulted in the introduction of a new type of resume, the video resume, which can be described as a video-taped message in which applicants present themselves to potential employers (Waung, Hymes, Beatty, & McAuslan, 2012). The use of video resumes instead of traditional paper resumes may have several advantages, such as the opportunity for applicants to show their potential more than in paper resumes due to additional visual and auditory information. Furthermore, applicants might consider it to be more convenient and up-to-date to use multimedia when applying for a job compared to solely using text-based applications such as paper resumes and application forms. At the same time, concerns have been voiced about judgmental biases towards subgroups on the basis of their race, sex, age, religion, and national origin in resume screening (Derous, Ryan, & Nguyen, 2012; Outtz, 2009), particularly so when using video resumes (Lefkow, 2007). Not much is known, however, about the actual benefits and disadvantages of video resumes. Research is struggling to keep pace with the speed with which these kind of new, internet-based technologies are adopted by organizations and applicants (Lievens & Harris, 2003). Issues that need to be taken into account when introducing new technology in high-stakes selection include, among other things, their acceptability (i.e., perceived fairness) and possible unintended discriminatory effects (i.e., negative selection results for subgroups; Cook, 2009).

Fairness issues in personnel selection are especially salient for underrepresented groups on the labor market, such as ethnic minorities. In Western countries, ethnic minorities need more time to find a job than their ethnic majority counterparts and their unemployment rates are higher (Forum, 2012). This differential job access has been explained by actual differences in job related qualifications as well as hiring discrimination. Various selection tools, such as cognitive ability tests (Outtz, 2009) have been extensively scrutinized for negative selection results for ethnic minorities. Yet the more ubiquitous tool of resume-screening has been less investigated (Derous et al., 2012), and video resume screening, until now, has hardly been researched at all.

In an attempt to fill this void, the fairness of paper and video resume screening is studied in this dissertation. In doing so it aims to shed light on the existing differential job access between ethnic minority and majority job applicants, as well as to add to our understanding of the use of video resumes as a technological innovation in personnel selection. The studies presented in this dissertation focus on perceptions of fairness (Research questions 1, 2 and 3) and on rater and resume characteristics that may lead to actual differential selection outcomes for ethnic minority and majority applicants in paper and video resume screening (Research questions 4 and 5).

To this end, a description is first provided of paper and video resume screening in personnel selection. Subsequently an overview is given of the labor market position of ethnic minorities in Western countries. Lastly, the main research aims of this dissertation are provided, resulting in the formulation of specific research questions.

A Short History of Resume Screening

The word resume stems from the Latin 'resumere', which means 'to sum up'. According to the etymological dictionary (2012) the word resume was given its current meaning in the nineteen forties as 'a biographical summary of a person's career'. The format of the resume may vary per country, but it is typically one to three pages long and many popular publications are available on how to write a resume (e.g., Buchel, Dinjens, Heinis, Hulswit, & De Waard, 2008; Lain Kennedy, 2007). Curriculum Vitae, or CV, is a synonym for resume in most countries, although in the United States and Canada a CV tends to be more detailed and longer than a resume, including every term of employment, publications and sometimes even samples of the applicant's work (Doyle, 2012).

The term 'resume' appears to first show up scientifically in the Journal of Applied Psychology in the nineteen seventies. The use of resumes to screen applicants was already common practice by then. For instance, Hakel, Ohnesorge, and Dunnette (1970) provided an example resume in their article to illustrate the stimulus material that was used in an experiment on interviewer decision making. They gave no further explanation of the resume than that "This resume evaluation task was chosen because it is typical interviewing practice to examine an application form prior to seeing the job applicant" (p. 28). A few years later, Levine and Flory (1975) estimated that one billion resumes were screened each year in the United States.

The use of some sort biographical information for initial screening can be traced further back in time, however, in the form of a 'personal history blank'. This blank contained some biographical information, such as age, marital status and years of education. Goldsmith (1922) described the scoring of a personal history blank to predict salesmanship. She described that "The personal history blank, however, has for some time been a routine part of the application for a sales license" (p. 149). Goldsmith continues with stating that "Almost every firm uses a blank of some description and its completion presents no novel task.…in the past, this blank had been required for every agent of the company… the personal history blank had served rather, in the main, merely to strengthen or weaken the general impression made by the applicant" (p. 149-150). In an attempt to objectify the use of personal history blanks, Goldsmith did an experiment in which the information on the blanks was weighted to create a score to predict sales in an insurance company. This resembles the practice of the 'weighted application blank' or bio data in selection. Bio data can be described as scales or items that pertain to historical events that may have formed a person's behavior or identity (Breaugh, 2009; Mael, 1991). This type of standardized measurement of an individual's personal history has shown to have good predictive validity (Ployhart, Schneider, & Schmitt, 2006). Bio data and weighted application blanks may be regarded as a standardized way to measure an applicants' history, whereas resumes provide a less standardized way to measure this. Moreover, resumes are typically created and designed by applicants, as opposed to bio data and other selection instruments, which are created by test developers.

The suggestion has been made that biographical information deduced from resumes, such as education and work experiences, is used to draw inferences about underlying attributes, such as personality and intelligence (Brown & Campion, 1994; Levine & Flory, 1975). These attributes are in turn used to assess the applicants' job suitability. The accuracy of this practice is highly debatable (Cole, Feild, Giles, & Harris, 2009). Nevertheless, a survey among 151 companies of the Fortune 1000 in the USA showed that 98% used the resume (Piotrowsky & Armstrong, 2006). Recently, technological developments have led to the introduction of video resumes, instead of, or in addition to the traditional paper resume. With the introduction of the video resumes, new questions arise on the benefits and disadvantages of this instrument for personnel selection.

Video Resume Screening

In the nineteen eighties the first personal computers were introduced, which also marked the onset of developments in computerized testing (Sands, Waters, & McBride, 1997; Oostrom, 2010). In the nineties, the use of internet started to spread. Furthermore, personal computers also became equipped with graphical user interfaces, larger memory capacities, and sound and video cards. This opened the door to the use of multimedia in selection procedures (Oostrom, 2010), such as the introduction of video resumes (Doyle, 2010). Video resumes have been described as short video-taped messages in which applicants present themselves to potential employers. Although the format may vary (e.g., use of multimedia), the common denominator is the introduction of visual and auditory information at the earliest screening stage. Typically, video resumes are uploaded to the internet for potential employers to review (Doyle, 2010).

Exact numbers on the frequency of use of video resumes in current selection practices is still lacking. A small pilot in 2009 among 176 HR-professionals at medium- and small sized enterprises in the Netherlands showed that only 8% actually used the video resume, and about 40% was willing to consider it (Hiemstra, 2009). But, as with traditional resumes, popular media coverage on video resumes is abundant. An internet search on August 20 2012 using the word 'video-resume' resulted in about 429.000.000 hits on google.com and 133.000 on youtube.com. Scholarly publications on the topic are scarce, resulting in only three hits from the scientific database Web of Science (Hamilton, 1998; Kelly & O'Brien, 1992; Warshawski, 1987). The publications by Hamilton (1998) and Warschawski (1987) originate from the world of dance. For artists it has been common practice for a longer period of time to send in tapes for audition (Derous, Taveirne, & Hiemstra, 2012). A recent example is the YouTube orchestra, for which musicians auditioned online by uploading a tape of their performance on YouTube (YouTube Symphonic Orchestra, 2011). Kelly and O'Brien (1992) used the video resume to teach job search skills to deaf students, helping them to present themselves to potential employers. Light (1993) also described the development of video resumes for persons with disabilities. One of the first scientific publications of video resumes for 'mainstream' applicants seems to stem from 1993 (Rolls & Strenkowski, 1993), in a pilot among education students. They stated that the distribution of video resumes may supply prospective employers with additional nonverbal and interpersonal information that can benefit all stakeholders.

In sum, resumes, and especially paper resumes, are widely used for initial screening, but less investigated when compared to other selection instruments. This accounts especially for the video resume, which has hardly been researched until now. With the use of new selection instruments, like

video resumes, questions arise on their fairness and acceptability, especially for underrepresented groups on the labor market, such as ethnic minority applicants.

Labor Market Position of Ethnic Minorities in Western Countries

In Western countries, workforces are culturally heterogeneous as never before and the immigrant flow is expected to increase in the future (Sussmuth, 2007). Cultural diversity has therefore become an important issue in many Western countries. In Western countries, unemployment rates for minority groups are often twice as high compared to the majority group (Myors et al., 2008). In 2012, in the Netherlands, unemployment rates among lower educated ethnic minorities nearly tripled the unemployment rates for lower educated ethnic majority job seekers (20% versus 7%; Forum, 2012). And the unemployment rates among higher educated ethnic minorities in the Netherlands were even five times higher than among higher educated ethnic majorities (16% versus 3%; Forum 2012). Furthermore, ethnic minorities in Western countries generally need more time to find a job when compared to ethnic majority job seekers with similar educational attainments (ILO, 2004; Van Gent, Hello, Odé, Tromp, & Stouten, 2006; Vandevenne & Lenaers, 2007).

Large differences between majority and minority unemployment rates have been explained by various factors, such as socio-economic factors and minorities' lower levels of job competencies and work-related attitudes (e.g., Te Nijenhuis, De Jong, Evers, & Van der Flier, 2004), but also to a substantial extent by hiring and workplace discrimination (De Beijl, 2000; Elliott & Lindley, 2008; Derous et al., 2012; Dolfing & Van Tubergen, 2005).

To stop workplace discrimination and to ensure cultural representation in various employment sectors, anti-discrimination laws have been introduced in different countries (Kelly & Dobbin, 1998; Kravitz et al., 1997). Besides that, and depending on the political climate, employers are encouraged to increase diversity to enhance the potential of workers (Thomas, 1990). Therefore, measures to promote cultural diversity at work can be either legislation driven or voluntarily introduced by organizations as part of (broader) diversity management activities. It is important to distinguish cultural diversity management from legislation because their aims are different. Legislation seeks to combat discrimination, while diversity management seeks inclusiveness and emphasizes business goals (Markuckaite, 2011; Kelly & Dobbin, 1998). A short description is provided here on legislation and diversity management in both the USA and Europe.

In the USA, legislation to combat employment discrimination was introduced in the 1960s with the Civil Rights Act. With this legislation, employers were encouraged to take positive actions to end discrimination of disadvantaged groups (Kelly & Dobbin, 1998). Disadvantaged groups were originally defined as women and ethnic minorities. Later other groups were also included (older workers and people with disabilities). So-called 'affirmative action' is obligatory by US-law and it requires organizations to monitor their workforce statistics to help them ensure that the ethnic representation at work reflects ethnic proportions in society (Crosby, Iyer, Clayton, & Downing, 2003). Four general types of affirmative action programs can be distinguished (Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006). The first is *Opportunity enhancement,* which aims to attract more target group members (e.g., women and ethnic minorities), but during the selection no preference is given to them. The second type of

affirmative action is *Equal opportunity*, which aims to prevent selection decision makers from assigning negative weights to members of a target group. The third is *Tiebreak*, in which members of a target group are given preference over others if their qualifications are equal. And a fourth type of affirmative action is *Preferential treatment*. This means that members of a target group are given preference even if their qualifications are inferior to others. But preferential treatment is forbidden in the USA. The most popular affirmative action program in the USA is opportunity enhancement (Turner & Pratkanis, 1994).

The European context and legislation, however, differs from the USA. European societies were very homogeneous until the 1950s when many Western European countries started to promote labor immigration (De Meijer, 2008). In the Netherlands, for example, the largest groups that came to this country to work originated from Turkey and Morocco (De Meijer, 2008). Immigration changed the ethnic composition of the big cities. For instance, immigrants constitute more than 48% of the labor market population of Rotterdam nowadays (CBS, 2012). Although in the 1950s immigrants were invited to work in European countries, unemployment rates for minority groups in Europe are currently relatively high (Myors et al., 2008). The European Commission and other EU institutions therefore increased their voice on immigrant issues (Markuckaite, 2011). In 2000, this resulted in the Racial Equality Directive (2000/43/EC) against discrimination on grounds of ethnicity in employment, training, education, social protection, membership of organizations and access to goods and services (European Union, 2000). This directive obliged EU member states to introduce anti-discrimination laws (European Union, 2009). Moreover, various campaigns encouraged employers to adopt anti-discrimination practices (Sussmuth, 2007). Similarly to the USA, equal employment policies and practices in Europe were introduced because of the growing understanding of existing discrimination in employment and the demand to combat it.

The EU Racial Equality Directive calls for 'positive action.' Positive action is described as measures undertaken to achieve full equality in practice for members of disadvantaged groups (European Commission, 2009). Positive action can be regarded as an equivalent of affirmative action, the term mostly used in the USA. But, contrary to affirmative action, positive action is not mandatory in Europe (Markuckaite, 2011). Similar to the USA, measures aimed at opportunity enhancement for ethnic minorities' careers are most popular (Wrench, 2002). Although the understanding of the prevalence of workplace discrimination is recent in Europe, most European citizens support the implementation of equal employment measures (European Commission, 2009).

Because recruitment, assessment, training, promotion, and retention are topics typically addressed by industrial and organizational psychologists, their contribution to ensure equal opportunities is significant. There is extensive psychological research on fair recruitment and selection by academics (e.g., Arvey & Renz, 1992; De Meijer, 2008; Ployhart & Holtz, 2008; Potosky, Bobko, & Roth, 2005; Pyburn, Ployhart, & Kravitz, 2008; Sackett & Wilk, 1994; Te Nijenhuis et al., 2004; Te Nijenhuis & Van der Flier, 2005). In practice, psychologists also examine selection criteria and tests to ensure that they are job related and not discriminatory in an unintended way (Cook, 2009; Evers, Lucassen, Meijer, & Sijtsma, 2009; Linnenbank & Speelman-Tjoeng, 2009). Many selection instruments have been scrutinized for possible bias, such as the employment interview (Arvey, 1979; Moscoso, 2000; Ployhart & Holtz, 2008), cognitive ability tests

(Te Nijenhuis et al., 2004; Outtz, 2009), and bio data (Bobko, Roth, & Potosky, 1999; Ployhart & Holtz, 2008), but the ubiquitous procedure of resume screening remains less researched, and even more so for video resume screening, which has hardly been researched until now.

The remainder of this introductory chapter will focus on perceptions of fairness and justice in resume screening and on factors related to negative selection outcomes for ethnic minority applicants compared to ethnic majority applicants in paper and video resume screening. In the following paragraphs, the research questions to be addressed in this dissertation will be introduced.

Perceptions of Fairness and Justice in Resume Screening

The question 'What is fair in selection?' may be more easily asked than answered. A variety of definitions exist for the concept of fairness in selection. The Standards of the Society for Industrial and Organizational Psychology (2003) define fairness as a social concept. Its definition depends on what one considers to be fair. For example, one may define fairness in selection as equal group outcomes, equitable treatment, similar opportunities for all test takers to prepare for a test, or absence of predictive bias. The statistical measurement of fairness (e.g., equal group outcomes or the absence of predictive bias) is possible, but the question whether an equal group outcome is fair, for example, is in its essence a social question.

Since the nineteen nineties research on the social definition of fairness from the applicants' perspective (i.e., 'Do you think this selection procedure is fair?') has grown, in addition to the psychometric side of selection procedures. In psychometrics, selection procedures are studied statistically to assess the reliability, validity, and cost efficiency from the organizations' perspective (e.g., Austin, Deary, & Egan, 2006; Egberink, Meijer, & Veldkamp, 2010). The growing attention for the social-motivational side of selection is reflected in a large body of international research on applicant perceptions of commonly used selection instruments, such as the written resume, work samples, cognitive ability tests, and personality measures (e.g., Anderson, Born, & Cunningham-Snell, 2001; Anderson & Witvliet, 2008; Derous, Born, & De Witte, 2004; Ispas, Ilie, Iliescu, Johnson, & Harris, 2010; Moscoso & Salgado, 2004; Nikolaou, & Judge, 2007).

The majority of research on this social-motivational side of selection fairness is based on a model of organizational justice that was introduced by Gilliland (1993). Gilliland states that the overall perceived fairness of the selection process is influenced by the applicants' procedural justice perceptions (i.e., a determination of whether or not applicants perceive the selection procedure as fair, such as in terms of perceived job relatedness and opportunity to perform) and perceptions of distributive justice rules (i.e., a determination of whether or not applicants receive the hiring decisions they feel they deserve, such as equity, equality). In their meta-analysis, Hausknecht, Day and Thomas (2004) described several reasons why organizations should take the perceptions of their applicants into account, among which perceived organizational attractiveness and propensity to initiate legal action.

Research has shown that resumes are perceived fairly equal, namely favorable, by applicants across countries (see for a meta-analysis Anderson et al., 2010). Less is known, however, on the use and preferences of immigrants/ethnic minorities *within* countries. And virtually no research exists on perceptions of video resumes. Furthermore, knowledge on the perceptions of ethnic minority applicants is important because potential legal and discriminatory concerns have been raised with the use of video resumes (Lefkow, 2007).

Understanding video resume preferences, particularly of underrepresented groups such as ethnic minorities, is very important because of experienced discrimination as well as to contribute to an on-going societal debate in the Netherlands and other Western countries on the merits of applying anonymously (Aslund & Skans, 2012; Bertolino & Steiner, 2011; Born, 2010). Applying anonymously implies that important categorization characteristics, such as name, sex and ethnicity are not presented in the paper resume. Although applying anonymously may also refer to sex and age, the debate has been focusing mainly on ethnicity (Derous, et al., 2009). Empirical tests with applying anonymously in the Netherlands and Sweden have resulted in the statement that it is not necessarily an effective tool for the reduction of hiring discrimination against ethnic minorities (Aslund & Skans, 2012; Born, 2010). The video resume can be regarded as the opposite of applying anonymously: more (non-relevant) characteristics are available through visual and auditory cues. The results of this dissertation may provide theoretical contributions on ethnic minority and majority applicant preferences on video resume screening, as well as provide recommendations for practitioners and policy makers regarding application policies. The first research question therefore is:

Research Question 1. What are the fairness perceptions of paper and video resumes among ethnic minority and majority applicants?

With the growing body of literature on applicant perceptions, there have been several calls for research regarding the determinants of those perceptions, including more or less stable individual difference variables, such as personality (e.g., Chan, Schmitt, Sacco, & DeShon, 1998; Ryan & Ployhart, 2000). Because fairness may not target every (minority) applicant in the same way (Derous et al., 2012), we will additionally identify potential moderating effects of applicant characteristics, namely ethnic minorities' ethnic identification and language proficiency. Furthermore, research has linked personality and cognitive ability to a broad array of work-related outcomes (e.g., Schmidt & Hunter, 1998). The role of applicants' personality and cognitive ability on applicant perceptions of paper and video resumes was therefore also explored. This has resulted in the formulation of the following research questions:

Research question 2a. Are ethnic minority applicant perceptions of paper and video resumes influenced by ethnic identity and language proficiency?

Research question 2b. Are applicant perceptions of paper and video resumes influenced by personality and cognitive ability?

Finally, because of its applicant-focused agenda, the literature remains almost mute on the perceptions of other significant stakeholders, such as recruiters, towards new selection instruments (see for exceptions: Costa et al., 2011; Derous, 2007). This is remarkable since personnel selection is a two-way process between the applicants and the recruiters. Therefore, the third research question on perceived fairness is posed among recruiters:

Research Question 3. What are the fairness perceptions of paper and video resumes among recruiters?

Perceived fairness in selection may differ from fairness in terms of measured discriminatory effects. The following paragraph therefore focuses on factors that may result in differential selection outcomes for ethnic minorities and majorities in paper and video resume screening.

Discriminatory Effects in Resume Screening

If asked, most recruiters will state that they only want to hire the best applicants for the job, regardless of their ethnicity or other characteristics such as gender or sexual orientation. Furthermore, rejection based on these characteristics is usually a form of direct discrimination and this is against the law, as described in Article 1 of the Dutch constitution and, for example, in the Civil Rights Act in the United States. *Direct discrimination* is therefore monitored in the legal system. An urgent concern in personnel selection, however, is *indirect discrimination*, which may cause adverse impact (Cook, 2009; Outtz, 2009).

Adverse impact basically means that person evaluation systems result in relatively more majority persons getting through than minority persons (Outtz, 2009). For example, personnel selection tests such as cognitive ability tests have proven to be the most valid predictor of future work performance (Schmidt & Hunter, 1998), but they also show the largest performance differences between subgroups (such as ethnic minorities; De Meijer, Born, Terlouw, & Van der Molen, 2006; Ployhart & Holtz, 2008), leading to a lower selection ratio among ethnic minority applicants compared to ethnic majority applicants (i.e., adverse impact). Alternative measurement methods, such as structured interviews and bio data, have shown to have less adverse impact compared to cognitive ability tests, but still mean subgroup differences are found on these selection methods, which in turn may result in differential job access (e.g., standardized mean differences in test scores between subgroups have been reported to be .33 for bio data, .23 for structured interviews, and 1.0 for cognitive ability tests; Bobko, et al., 1999). Underlying factors leading to relatively more majority group members getting hired compared to minority group members may be related to (reported) subgroup differences in job related qualifications (i.e., the human capital hypothesis) or biased selection methods (i.e., the hiring discrimination hypothesis). Both hypotheses are addressed in this dissertation.

To be able to measure adverse impact in resume screening, several so-called audit studies have been performed in earlier research. In this type of study, manipulated resumes of equally suitable applicants who differ in one key feature (e.g., name or gender) are sent to employers for a review of their job suitability. With this type of studies, cumulative evidence has been gathered around the world in support of the hiring discrimination hypothesis (e.g., Bertrand & Mullainathan, 2004; De Beijl, 2000; Derous et al., 2012; Derous & Ryan, in press; Dolfing & Van Tubergen, 2005). Derous et al. (2012), for example, showed that an applicant with an Arab-sounding name on his resume was four times less likely to be invited to a job interview when compared to another applicant with an ethnic-majority sounding name, despite all other qualifications and characteristics being equal.

A drawback of this type of studies, however, is that only manipulated resumes have been used. In these resumes, job qualifications were kept equal in order to investigate hiring discrimination upon organizational entry. Yet, it may well be that there are real differences in reported job qualifications between ethnic majority and ethnic minority applicants. For example, this may be due to differences

in reported extracurricular activities, which in turn may result in differential job suitability ratings. To our knowledge, not much research has been done on existing differences in actual resumes of ethnically diverse applicants despite the ongoing societal and scientific debate about human capital deficits and hiring discrimination (e.g., Born, 2010; Krings & Olivares, 2007; Myors et al., 2008). Hence, one of the studies described in the present dissertation aims to investigate differences in resume content and presentation characteristics, which are usually considered indicators of human capital when assessing the applicants' employability (Brown & Campion, 1994; Cole, Rubin, Feild, & Giles, 2007):

Research Question 4. Can differential job access partly be explained by the way ethnic minorities and majorities present themselves in their paper resume?

It has been demonstrated that recruiters may infer impressions of applicants' abilities and other attributes from resume data that go beyond the reported achievements and experiences to decide on an applicants' employability (Brown & Campion, 1994; Cable & Gilovich, 1998; Cole et al., 2009). A troublesome aspect of subjective inferences may be that they are biased. As mentioned earlier, ethnic cues, such as ethnic-sounding names, have been evidenced to be a direct antecedent of employment discrimination in resume-screening (Bertrand & Mullainathan, 2004; Derous et al., 2012). Models of impression formation might offer an explanation (Brewer & Harasty-Feinstein, 1999; Fiske, Lin, & Neuberg, 1999). These models suggest that category-based information processing (e.g., identifying an applicant as 'a woman' or 'an ethnic minority') occurs automatically, and will be particularly strong when limited individualized information is available. When limited individualized information is available, people tend to rely on their category-based stereotypes. These stereotypes tend to be more negative towards members of other social groups, such as stereotypes of ethnic minorities as held by the ethnic majority (e.g., 'Moroccans cannot be trusted' is a negative stereotype in Dutch society). Stereotypes of ethnic minorities as held by ethnic majorities may differ per ethnic subgroup, but they are generally more negative than stereotypes of majority in group-members (Lee & Fiske, 2006). Because in resume-screening job applicants are judged on the basis of their resume only, judgments may be formed on the ethnic majority recruiters' category based stereotypes, and this psychological process may explain observed hiring discrimination (e.g., Derous et al., 2012).

Compared to paper resumes, video resumes contain more information richness due to additional visual and auditory cues and may therefore have a higher fidelity than paper resumes. Therefore, much like the employment interview, video resumes may instigate hiring discrimination because ethnicity-related characteristics non-relevant to the job that have been associated with hiring discrimination in interviews are also revealed in a more direct way. Among these sources of ethnic information are applicants' skin color and accent (e.g., Barrick, Shaffer, & DeGrassi, 2009; Hebl & Kleck, 2002; Hosoda & Stone-Romero, 2010; Purkiss, Perrewe, Gillespie, Mayes, & Ferris, 2006). Hence, video resumes may lead to even more hiring discrimination against minorities than paper resumes (the *categorization hypothesis*). At the same time, video resumes may also allow for more direct expressions of behavioral competency (Funke & Schuler, 1998) compared to paper resumes. Therefore, it can be argued that the information sources in video resumes provide more individuating information compared to the 'paper person' in the paper resume. Because applicants are able to present a more personalized picture of

themselves, one may argue that *less* negative ethnicity–based stereotyping will occur in video-resume screening because a more individualized image can be conveyed. Negative stereotyping, which is associated to the automatic process of social categorization, is less functional for applicants about whom a great deal of individuating information is available (Quinn, Mason, & Macrae, 2009). In other words, the ethnic majority recruiters' (negative) impression based on the social category of an applicant (e.g., a Moroccan applicant) may be become more individualized (i.e., not just a Moroccan applicant, but a person with unique strengths and weaknesses) when more personalized information is available. This personalized impression formation may be more the case in video resume screening compared to paper resume screening. Less social categorization in video resume screening could therefore reduce biased decision making for minority applicants than in paper resumes (the *individuation hypothesis)*. Little studies, however, have considered this issue. Therefore, the present dissertation formulated the following research question based on these opposing hypotheses (individuation versus categorization):

Research Question 5. Do differential discriminatory effects occur against ethnic minorities in paper and video resume screening?

The five research questions that have been described here are addressed in four empirical studies. These empirical studies are described in chapters 2 to 5. Each chapter can be read separately, and therefore some overlap may exist in the theoretical grounding of the chapters.
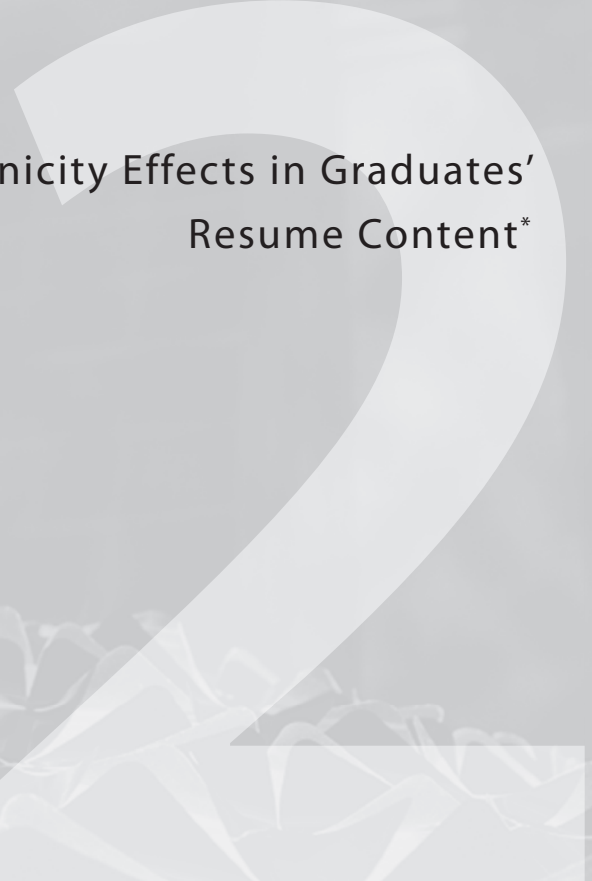
Summary and Chapter Overview

The main goal of this dissertation is to study perceived fairness and discriminatory effects in paper and video resume screening. It aims to shed light on existing differential job access between ethnic minority and majority job applicants in Western countries, as well as to add to our understanding of the use of video resumes as a technological innovation in personnel selection. In **Chapter 2** it is tested whether differential job access can partly be explained by the way ethnic minorities present themselves in their resume (Research question 4). To this means, a comparison between 100 actual non-Western ethnic minority graduate resumes and 100 actual native Western ethnic majority graduate resumes is made. **Chapter 3** investigates fairness perceptions among ethnically diverse job seekers who were enrolled in a training that resulted in the creation of a video resume (Research question 1). Minority applicants' ethnic identity and language proficiency were studied as potential moderators of those perceptions (Research question 2a). In **Chapter 4** fairness perceptions of paper and video resumes are again investigated, but now among actual applicants who applied with a video and paper resume in a high-stakes selection procedure (Research question 1). Additionally, the influence of personality and cognitive ability on their perceptions is explored (Research question 2b). **Chapter 5** investigates recruiter fairness perceptions of paper and video resumes (Research question 3) and describes a field experiment which aims to study judgmental biases that may lead to discriminatory decisions in paper and video resume screening (Research question 5). Finally, in **Chapter 6** the main findings from all studies are summarized and discussed. Strengths and limitations of the studies are described, as well as practical implications and suggestions for future research.

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Ethnicity Effects in Graduates'
Resume Content*

Abstract

Highly-educated ethnic minority entrants in Western countries need more time to find a job compared to their Western ethnic majority counterparts. The present study examined whether this differential job access is partly explained by the way ethnic minorities present themselves in their resumes. To this mean, a comparison between 100 non-Western ethnic minority graduate resumes and 100 native Western ethnic majority graduate resumes was made. Non-Western ethnic minorities score significantly lower on reported organizational internships, leadership experiences, and extracurricular activities. Although most effects were small, these differences in resume content resulted in lower job suitability ratings for non-Western ethnic minorities compared to Western ethnic majorities, as judged by professional recruiters / HR experts. Resume presentation (e.g., layout and grammar) also was a significant predictor of job suitability ratings, but no ethnicity effects were found in these resume characteristics. Because rater effects which may be related to hiring discrimination were controlled for, it can be concluded that the reported human capital in resumes can explain differential job access of ethnic minority compared to ethnic majority graduates. Theoretical and practical implications for assessing ethnic minorities upon organizational entry are discussed.

Ethnic minorities in Western countries generally need more time to find a job when compared to their ethnic majority counterparts (ILO, 2004; Van Gent, Hello, Odé, Tromp, & Stouten, 2006; Vandevenne & Lenaers, 2007), and this is usually explained by minorities' lower levels of job competencies and work-related attitudes (the *human capital hypothesis*) as well as by biased, discriminatory ratings from the part of the majority employer (the *hiring discrimination hypothesis*; Elliott & Lindley, 2008).

Some evidence has been found for the hiring discrimination hypothesis (e.g., Bertrand & Mullainathan, 2004; De Beijl, 2000; Derous, Nguyen, & Ryan, 2009; Dolfing & van Tubergen, 2005). However, the majority of studies that lend support for the idea of ethnic discrimination during hiring used manipulated resumes to study differential job access of ethnic minorities and majorities. Moreover, in these resumes, job qualifications were kept equal in order to investigate hiring discrimination upon organizational entry. Yet, it may well be that there are real differences in reported job qualifications between Western ethnic majority and non-Western minority applicants. To our knowledge, not much research has been done on existing differences in actual resumes of ethnically diverse applicants despite the ongoing societal and scientific debate about human capital deficits and hiring discrimination, such as in the Netherlands (e.g., Born, 2010; Sligter, 2006), France (e.g., Bertolino & Steiner, 2011), Switzerland (e.g., Krings & Olivares, 2007), the United States and several other Western countries (e.g., Myors et al., 2008). Hence, the present study aims to investigate differences in resume content and presentation characteristics, which are usually considered indicators of human capital when assessing the applicants´ employability (Brown & Campion, 1994; Cole, Rubin, Feild, & Giles, 2007). More specifically, we aim to explore whether resumes of non-Western ethnic minority and ethnic Western majority applicants differ, as this may partially explain differential job access. This study has practical value for career counselors, policy makers and ethnic minority graduates trying to understand and bridge the existing gap on the labor market between ethnic minority and majority entrants. Furthermore, the research described here extends the existing literature as it, to our knowledge, is the first to hypothesize on resumes´ human capital content and related job suitability assessments during resume-screening in a European context.

Resume Characteristics

Literature on resume screening (Cole et al., 2007) mentions three resume characteristics that influence impression formation upon resume screening, namely *academic performance*, *work experience*, and *extracurricular activities*. Recruiters tend to focus on these sources of information to evaluate the applicants' employability (Cole et al., 2007). Although the legitimacy can be debated, recruiters infer impressions from resume data that go beyond the reported factual content, for example to assess an applicant's personality which in turn is used to evaluate the applicant's employability (Cable & Gilovich, 1998; Cole, Feild, Giles, & Harris, 2009). It may well be that ethnic minorities' reported difficulties in job-finding can be partly explained by the way they represent themselves in their resumes (i.e., reported human capital), which in turn may lead to lower employability assessments on the part of the recruiter rather than or in addition to possibly biased decision-making (i.e., hiring discrimination).

Research has shown that differential job access is largest among non-Western ethnic minorities compared to native Western European ethnic majorities. In Western European countries the unemployment rates of minority workers are often two to three times higher than those of national workers. And this is particularly striking when considering that many young ethnic minority workers were born and raised in these countries, the so-called 'second generation immigrants' (De Beijl, 2000).

In the Netherlands, for instance, Arab (Moroccan) graduates need twice as much time to find a job compared to their Dutch majority counterparts (De Jong & Verbeek, 2005). We therefore focused on highly educated non-Western ethnic minority graduates compared to Western ethnic majority graduates. In the Netherlands, where this study was conducted, most non-Western ethnic minorities originate from Turkey, Morocco, Surinam and the Dutch Antilleans (Central Bureau of Statistics [CBS], 2010).

In the following paragraphs, we discuss potential differences between non-Western ethnic minorities and majorities' resume characteristics (academic performance, work experience, extracurricular activities) and resume presentation, as well as how such differences may affect ethnic majorities and minorities' job suitability ratings.

Academic performance. Recruiters form impressions of the applicants' knowledge, skills, abilities and other characteristics (KSAO's) from resume information. Reported information on academic performance is frequently used when selecting for entry-level positions (Rynes, Orlitzky, & Bretz, 1997). The extensive use of study grades (or Grade Point Average/GPA) is due to recruiters' beliefs that GPA reflects the individual's intelligence and motivation (Cole et al, 2007; Roth & Bobko, 2000). Employers looking for someone with the ability to quickly learn new skills and to work autonomously, will consider academic performance as an indicator of person-job fit (Bills, 1998).

Ethnicity effects in school performance often already occur at a very early educational stage (i.e., during the primary and secondary school), with ethnic minorities scoring significantly lower on language and mathematical skills (Herweijer, 2009; Kao & Thompson, 2003), when compared to the white ethnic majority and Asian ethnic minorities. It has been suggested that differences in educational attainments remain visible throughout the educational career. Internationally, more ethnic minority students drop-out of college than native students (Council for Work and Income [RWI], 2006; Eimers & Pike, 1997; Hobson-Horton & Owens, 2004; Just, 1999). Moreover, their study results tend to lag behind when compared to those of their ethnic majority counterparts: Ethnic minorities, on average, have lower GPAs and a lower percentage of subjects that are passed successfully (Meeuwisse, Severiens, & Born, 2010a; Swail, Redd, & Perna, 2003). Although some improvement has been seen over the past few years (Herweijer, 2009), non-Western ethnic minorities tend to still lag behind compared to their Western majority and Asian ethnic minority counterparts (Kao & Thompson, 2003; Swail et al., 2003; Modood, 2004) and these findings may still be reflected in highly educated ethnic minorities' resume content, such as in reported GPA's, internships, specific skills and training. From this, Hypothesis 1 may be derived:

Hypothesis 1. Non-Western ethnic minority entrants report less academic performance compared to resumes of Western ethnic majority entrants.

Work experience. Recent graduates' work experience is usually limited or absent. It is therefore considered less important in entry-level selection (Cole et al., 2007). One of the most noticeable trends in employment, however, has been employers' rising expectations of newly recruited graduates (Derous & Ryan, 2008). Indeed, a few studies have reported that the availability of relevant work experience positively influences hiring decisions (e.g., Knouse, 1994). Students are therefore strongly encouraged to gain work experience well before graduation to facilitate school-to-work transition and to gain a competitive advantage on the labor market. Not surprisingly, many students engage in part-time jobs when in college because they can earn money in this way as well as build up interesting resumes (Derous & Ryan, 2008). Active resume-building, however, is only done by taking up additional jobs that are relevant for future careers.

Ethnic minority students often have lower socio-economic backgrounds (Herweijer, 2009) and may more easily take additional jobs for financial reasons than for resume-building. Due to this stronger financial necessity, it is possible that ethnic minority students have less opportunity to focus on relevant work experience or (unpaid) internships. Furthermore, research in the Netherlands shows that ethnic minorities report more difficulties in finding relevant internships (Dolfing & van Tubergen, 2005; RWI, 2006). Although both ethnic minority and majority entrants may report work experience, ethnic minorities will report less work-related experiences, such as work-related supervisory positions and achievements:

Hypothesis 2. Non-Western ethnic minority entrants report less work-related experiences on their resumes compared to resumes of Western ethnic majority entrants.

Extracurricular activities. From information on extracurricular activities in resumes, recruiters tend to infer competencies to evaluate the applicants' employability (Cole et al., 2007). Research (Nemanick & Clark, 2002; Rubin, Bommer, & Baldwin 2002) has indicated that involvement in various extracurricular activities is associated with stronger communicative, initiative, decision-making, and teamwork skills. For instance, students who held leadership positions as extracurricular activities, display better interpersonal skills than students who held no officer positions (Rubin et al., 2002). Student organizations or associations usually aim to facilitate extracurricular activities, for example debating, sports, or networking. The origin and organization of these associations may vary per country, but the existence of social student associations that facilitate extracurricular activities that may help in resume building is widespread in Western countries.

Van Gent et al. (2006) found that highly educated ethnic minority applicants report less extracurricular activities compared to their Dutch majority counterparts. They estimated the ethnicity of 400 resumes from the database of a job search website and they found that ethnic minorities less often reported affiliations to social student associations, reported less elected offices, and also reported less international experiences. Please note that in this study, international experiences was originally hypothesized under extracurricular activities but classified by recruiters under 'academic performance' (see Method section).

It is suggested that the lag in extracurricular activities could partly explain the differential job access of ethnic minorities/ Western majorities. In replication of these results it is expected that

resumes will differ in reported extracurricular activities, in such a way that ethnic minorities report less membership and activities in professional and/or social student associations, fewer elected offices and fewer other types of extracurricular activities that may be considered relevant indicators of job-relevant competencies by recruiters, such as volunteering for community services:

Hypothesis 3. Non-Western ethnic minority entrants report less extracurricular activities on their resumes compared to resumes of Western ethnic majority entrants.

Resume presentation. In performing the initial screening, recruiters should focus on factual resume content that is relevant for the job (Cole et al., 2009). Although its legitimacy can be debated, Cole and colleagues state that recruiters also form impressions from resume data other than educational performance, work experiences, and skills (Cable & Gilovich, 1998; Cole, Field, Giles, & Harris, 2004).

In addition to impressions that are inferred from factual information, it may therefore well be that other, non content-related resume information influences the recruiters' impressions too, such as grammar, layout, and style. The influence of form aspects on recruiter employability assessments has been researched less extensively (Arnulf, Tegner, & Larssen, 2010). Recent research by Arnulf et al. (2010), however, suggests that aesthetic aspects of resumes (e.g., white vs. coloured paper and layout) influence the decision of recruiters to shortlist a candidate, with 'formal' resumes printed on white paper receiving more positive evaluations than 'creatively designed' resumes. To our knowledge, no research has been done on differences in resume presentation in non-Western ethnic minority and majority resumes. To check for possible differences between non-Western ethnic minorities and Western ethnic majorities in the presentation of resume information (e.g., grammar, layout, style) the following research question is formulated:

Research question. Will resumes of non-Western ethnic minority entrants differ from those of Western ethnic majorities in terms of presentation?

Job suitability. Research has shown that academic performance, work experience and extracurricular activities are considered important indicators of applicants' characteristics and, hence, their job suitability (Brown & Campion, 1994; Cole et al., 2007). It is hypothesized that non-Western ethnic minority job entrants will generally report lower academic performance, work-related experience and less extracurricular activities (Hypothesis 1-3). This should in turn be reflected in the perceived employability.

Since the aim of this study is to investigate whether differential job access might be partly explained by reported human capital characteristics on recent graduate resumes, we propose that:

Hypothesis 4. Non-Western ethnic minority entrants' resumes will receive lower job suitability ratings compared to Western ethnic majority entrants due to differences in reported resume content (academic performance, work experience and extracurricular activities) and resume presentation.

Method

Participants

Applicant participants. Resumes of 200 recent graduate applicants were analyzed of which 100 were native Western (Dutch) ethnic majorities and 100 had non-Western ethnicity. These resumes were collected through campus career counselors, from a dataset of 750 resumes, of which approximately 15% had a non-Western ethnicity. There were 36.5% male and 63.5% female students and the average age was 24 (*SD* = 2.0). Students reported a broad variety of academic majors in their resumes (e.g., social sciences, law, economics and other disciplines). The non-Western applicant participants were all immigrants who lived permanently in the Netherlands. Other foreign graduates (e.g., exchange students) were not included in this study. The sample characteristics of both ethnic majorities' and minorities' resumes are presented in Table 1.

To ensure the students' privacy and to minimize possible biases in the ratings by the recruiter participants, all resumes were made anonymous by masking the personal data information that is usually presented at the top of the resume (e.g., name, address, age, gender, phone number, e-mail address, nationality, and photograph).

Table 1
Sample characteristics of Ethnic Majority and Ethnic Minority resumes

	Total Sample	Ethnic Majority	Ethnic Minority
N	200	100	100
Male/Female (%)	36.5/63.5	31/69	40/60
AverageAge (*SD*)	24.6 (2.0)	24.6 (1.63)	24.6 (2.32)
Academic Major (%):			
Social Sciences	21.4	15.3	18.3
Law	18.2	10.2	27.2
Economics	53.6	65.3	42.4
Other	5.7	9.2	2.2

Recruiter participants. Forty experts in recruitment and resume-screening compared the 200 graduate resumes. They were invited through the professional network of a selection agency. The experts were recruiters and HR professionals for whom resume screening is one of their daily tasks. Participants were employed in different profit organizations: Financial institutions (10%), recruitment and executive search agencies (45%), selection agencies (37.5%), and other organizations (7.5%). Seventy percent was female, with an average age of 35 (*SD* = 10.3). The average amount of work experience as a recruiter/HR professional was 7.5 years (*SD* = 7.2) and the majority had a bachelor (47.5%) or master degree (50%), whereas one recruiter had secondary vocational education.

Procedure

A "survey was conducted using genuine resumes and actual recruiters. Recruiters' e-mail addresses were collected through the professional network of a selection agency. They were invited by e-mail and to ensure that the recruiters were blind of the study goals/hypotheses, the e-mail contained an invitation to participate in a study on resume characteristics that are considered important for entrants on the labor market. To ensure a high response rate the recruiter participants also received a phone call after the invitation by e-mail. Note that the research was carried out in an independent way and not for any other business-related reason, such as doing a favor to the HR-agency. This information was also provided to the participants at the onset of the study. Recruiters were informed that the study consisted of a resume rating task and a follow-up meeting with the researcher that would take place approximately two weeks after having completed the rating task. After having given their informed consent, recruiters were mailed a package of 10 anonymous resumes, 10 rating forms, instructions, a short biographical questionnaire (i.e., age, gender, educational level, work experience) and a pre-stamped return envelope. Each package contained 5 ethnic majority and 5 non-Western ethnic minority resumes, presented in a random order. Recruiters were asked to rate each of the 10 resumes on the presence of resume characteristics (i.e., academic performance, work experience, extracurricular activities, and resume presentation, see further). Thereafter, a position-hiring scenario was presented (see below for a description) in which recruiters were asked to evaluate the job suitability of each resume. Each resume was rated independently by two recruiters. Finally, recruiters filled-out a short biographic questionnaire.

Approximately two weeks after having returned the ratings and biographical questionnaire each recruiter was invited for an individual follow-up meeting with the researcher. The rationale behind this follow-up meeting was that even though personal data information of the resumes was masked, through information in the resumes the ethnicity of the applicant could perhaps still be recognizable. Specifically, ethnic cues may have sometimes remained in resume content that can be considered human capital: specified language skills (e.g., being fluent in Turkish) or ethnicity related affiliations (e.g., being a board member of the Moroccan student association). Research has also shown that the recruiters´ prejudice can influence resume ratings and related hiring recommendations of ethnically diverse applicants (Derous et al., 2009). To be able to control for possible rater effects due to prejudice, the recruiters conducted measures on both explicit and implicit prejudice during the follow-up meeting. The follow-up meeting was deliberately separated in time from the resume rating task to prevent biased study results on ethnicity effects in resume content. To control for possible sequence effects, the presentation of the measures during the follow-up meeting was counterbalanced. Upon completion, participants were debriefed.

Position-Hiring Scenario

To provide a standard to measure job suitability, we introduced a position-hiring scenario. Following earlier work on resume reviewing (see Cole et al., 2007, for a similar approach), a position-hiring scenario was presented that had to be applicable for the variety of academic majors that was represented in the sample, and therefore, had to be broad enough in its description. After having rated the presence of resume characteristics, recruiters read the following description: "Assume there is an entry-level job opening at a medium-sized Dutch organization that fits the academic major in the resume you have just rated. Depending on the academic major, you can think of an entry-level job opening in Finance & Accounting, Human Resources, Logistics & Supply Chain, Marketing & Sales, Operations, Research & Development, Technology ICT, Staff & Support, Legal services or Health. Now try to answer the following questions, while keeping in mind this job opening". After having read the position-hiring scenario, participants rated the applicant resumes on job suitability.

Measures

Resume rating form. The criteria to assess the resumes were based on items previously used by Brown and Campion (1994) and Cole et al. (2007) to assess academic performance, work experience, and extracurricular activities of graduates. First, three experts in recruitment and selection adapted the rating forms to the Dutch context. Some items were deleted or adjusted because they were not applicable to the Dutch academic context (e.g., 'Dean's list membership' or 'Stated having earned college expenses'). The item 'Has international experience' was added to the extracurricular activities category as it was considered relevant for graduate entrants in Europe. Additionally, three items on resume presentation were added (e.g., 'has made typing and/or grammatical errors'). The resulting, adjusted rating form was then tested in a pilot study. In this pilot study, eight interns of a selection agency followed a three-hours training on resume screening and afterwards independently rated 20 resumes according to the adjusted rating form. Intra-class correlations were calculated and items that showed a correlation below .30 were deleted or rephrased (4 items).

The final rating form that was sent to the recruiters consisted of six items on academic performance (e.g., 'knows foreign languages'), five items on work experience (e.g., 'had a side job while studying'), seven items on extracurricular activities (e.g., 'was member of a social student association'), and three items on resume presentation (e.g., 'has a clear layout'). Each item was scored on a 5-point Likert-type scale with 1 indicating the absence of resume information on a particular scale and 5 indicating a very elaborate description.

After the recruiter ratings were collected, and following previous research by Cole et al. (2004; 2007), an exploratory factor analysis (EFA) using Principal Axis Factoring (OBLIMIN) was performed for the 18 items related to academic performance, work experience and extracurricular activities (three factor solution). The item 'received scholastics awards' was removed, because it was absent in the resume sample. The item 'volunteered for community services' did not load on any of the factors. The items ´knows foreign languages´ and ´has computer skills´ did not load consistently on one of the three factors reflecting the original categories (see Brown & Campion, 1994). This appears to be in line with other studies using these items (e.g., Cole et al., 2007). The items 'held an organizational internship' and 'has international experience' were originally categorized under respectively work experience and extracurricular activities, but both items now loaded on academic performance (i.e., on the basis of the Principal Axis Factoring). A possible explanation is that both activities are generally undertaken as part

of the academic curriculum. Both items were therefore categorized under academic performance in the final rating scales used for hypothesis testing.

The final rating form used for the hypothesis testing consisted of seven items on academic performance (a = .57), four items on work experience (a =.56) and six items on extracurricular activities (a = .84) and explained 37% of the common variance. Additionally, the three items on resume presentation were used to analyze the research question. Although the EFA and internal consistencies yielded some valuable insights into the properties of the rating form for hypothesis testing, it can be argued that the factors are indexes rather than scales in which unidimensionality is assumed (Christiansen, Wolcott-Burnam, Janovics, Burns, & Quirk, 2005; Streiner, 2003). For example, the measured items in academic performance are better considered as evaluations of several aspects of academic performance that together form an index of this measure, rather than as items that manifest a single underlying construct in which positive correlations and interchangeability of the items is assumed. Furthermore, the deletion of items to obtain higher internal consistencies may come at the cost of losing valuable information that may reflect relevant reported human capital differences between majority and minority graduate resumes. Therefore, all items were included to test for possible differences between ethnic minority and majority graduate entrants' resumes (for an overview of all items see Table 4).

Job suitability. Job suitability was measured with a 3-item Likert-type scale as adapted from Derous et al. (2009) and Derous, Pepermans, De Greef, and Van Den Mosselaer (2010). The items were "Given all information you read about this applicant, how suitable do you believe this applicant is for this function", "Your overall impression of the applicant is…" and "What is the likelihood that you would invite this person for a job interview". Internal consistency was high (α = .93).

Prejudice. To be able to control for rater effects that may be related to hiring discrimination, the recruiters´ explicit and implicit prejudice was measured. First, raters' *explicit prejudice* against non-Western ethnic minorities was measured during the follow-up meeting using an adapted form of the Modern Racism Scale (MRS; McConahay, Hardee, & Batts, 1981). The MRS was originally designed to measure prejudice against African-Americans (e.g., McConahay, 1986). Since the nineteen nineties the MRS has successfully been adapted for use with studies not targeting African-Americans, such as Australian-Aboriginals (e.g., Augoustinos, Ahrens, & Innes, 2004; Pedersen & Walker, 1997), Hispanic-Americans (e.g., Purkiss, Perrewé, Gillespie, Mayes, & Ferris, 2006) and Arabs (e.g., Derous et al., 2009). Because our sample consisted of a variety of non-Western ethnic minorities, we adapted the MRS for the target group "non-Western ethnic minorities". All occurrences of the word "Blacks" were changed into the more general description of "non-Western ethnic minorities". The scale consists of seven Likert-type items, such as "Ethnic minorities are getting too demanding in their push for equal rights" (1= *disagree strongly*; 5= *agree strongly*). Cronbach´s alpha was .73.

Because explicit prejudice may influence hiring decisions in an indirect manner, e.g., through business-related justifications (Brief, Dietz, Cohen, Pugh, & Vaslow, 2000; Purkiss et al., 2006), and because explicit measures may be vulnerable to social desirable responding, we also measured recruiters' prejudice towards non-Western ethnic minorities in an implicit way, using an Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998). There has been debate about the validity of the IAT

(e.g., Blanton, Klick, & Mitchell, 2009; Landy, 2008a, 2008b). But the IAT has relevance here, because recent research has also indicated that implicit prejudice may influence decision making upon resume screening in a more subtle, implicit way (see Derous et al., 2009) and that implicit measures might be less vulnerable to social desirable responding (Ziegert & Hanges, 2005).

The IAT was modeled after those from existing studies on implicit prejudice and discrimination (e.g., Derous, et al., 2009; Greenwald et al., 1998). In general, we used the order of the IAT trials and counterbalancing in a similar way to that described by Derous et al. (2009), but the stimuli in our IAT were *non-Western ethnic minority names* and *Western ethnic majority (Dutch) names* (e.g., Mohammed, Kees) and *pleasant* and *unpleasant* words (e.g., heaven, pain). The procedural characteristics (counterbalancing the block order within the IAT) had no significant effects on findings. Speed (response latency in *msec*) and accuracy of word categorization (error percentages) were recorded to calculate the IAT-measure "D1" measuring the relative ease with which raters make associations between pairs of contrasted targets (e.g., ethnic majority vs. ethnic minority names) and evaluations (e.g., pleasant vs. unpleasant words). For instance, for faster pairing of "Western ethnic majority names and pleasant words" (compatible condition) compared to "Non-Western ethnic minority names and pleasant words" (incompatible condition) reflects implicit prejudice toward non-Western ethnic minorities, based on names. More implicit prejudice results in smaller D1-values, because latencies of the incompatible sorting conditions are subtracted from those of the compatible conditions. The D1- value in this study was -.26 (*SD* pooled = .18), resulting in an overall IAT-effect "*d*". The IAT-effect "*d*" represents the size/strength of the prejudice, with IAT-effect sizes of .20, .50, and .80 being small, medium, and large, respectively (see Greenwald et al., 1998, and Greenwald, Nosek, & Banaji, 2003 for the latest scoring procedure and effect sizes). The effect size in the present study was large, d = 1.43.

Preliminary Analysis on Rater Effects

Before the testing of hypotheses we assessed the magnitude of rater effects in our study, because these effects may influence the interpretation of the study results. We calculated how much variance in the job suitability ratings (dependent variable) was explained by recruiter characteristics (sex, explicit prejudice, implicit prejudice, education; fixed factors), and random effects due to the recruiter sample characteristics (random factor), as well as the applicants' ethnicity (fixed factor) and sample characteristics of the resumes (random factor). We examined the nested data structure using multilevel analysis in SPSS 17.0. Since evaluations of the applicants (Level 1) involve data nested within a recruiter characteristic (Level 2), such dependency needs to be dealt with correctly. Because the dataset was relatively small for multilevel analysis, we tested the factors in various models (recruiters´ explicit and implicit prejudice, recruiters' sex, recruiters´ education, applicants' ethnicity, and random factors related to the recruiter sample and to the resume sample). The proportion of explained variance in our study could be fully appointed to the resume sample (intra-class correlation = 1.0). The other factors accounted for less than 1% of the explained variance (with intra-class correlations < .01).

Before testing the hypotheses, we also assessed the inter-rater reliability, as indexed by a two-way random effects intra-class correlation (ICC), for both the ethnic minority and majority resumes. Since

intra-class correlations are an indication of agreement, any differences in intra-class correlations among minority and majority resumes might reflect general cultural biases in resume-screening, particularly so when consistency among recruiters is less for non-Western ethnics than for native Western ethnic majority applicants/resumes. The results are presented in Table 2.

Table 2
Inter-rater Reliability – Intra-class Correlations for both Ethnic Majority and Minority Resumes

		Ethnic majority	Ethnic Minority	*p*
1	Academic performance	.83	.87	.16
2	Work experience	.63	.60	.37
3	Extracurricular activities	.89	.71	.00**
4	Resume Presentation	.39	.24	.25

Note. Intra-class correlations two-way random model, absolute agreement. Averaged correlations are reported here. * $p \leq$ .05; ** $p \leq$ .01

According to Shrout (1998) intra-class correlation coefficients (ICC) are substantial if ICC ≥ .80, moderate if .60 ≤ ICC < .80, and low if ICC < .60. Some ICC's were quite high, specifically on academic performance. However, the ICC's for work experience were moderate and resume presentation aspects in particular showed low ICC's, indicating that the inter-rater reliability varied across the type of resume information. As can be seen from Table 2, analyses using a Fisher transformation showed significant differences between minority and majority intra-class correlations for extracurricular activities. Analyses at the item level showed differences in ICC's on the items 'listed activities in professional societies' ($ICC_{ethnic\ majority}$=.78 vs. $ICC_{ethnic\ minorities}$= .55, *p*= .00) and 'held elected offices' ($ICC_{ethnic\ majority}$=.80 vs. $ICC_{ethnic\ minorities}$= .63, *p*= .01).

Results

Descriptives

The means, standard deviations (*SD*s), and correlations of the study variables are described in Table 3. Before we tested the hypotheses, we checked the correlations of the applicant demographics with the other study variables, and we did this for ethnic minority and majority applicants separately. Applicants' age correlated positively with academic performance ($r_{ethnic\ majority}$=.35, *p* < .01; $r_{ethnic\ minorities}$= .39, *p* < .01), and job suitability ($r_{ethnic\ majority}$=.27, *p* < .01; $r_{ethnic\ minorities}$= .34, *p* < .01), and was therefore controlled for[1].

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[1]   Age was a significant covariate when testing for ethnicity effects in reported academic performance (*F* (7, 190) = 5.52, *p* =.00, η² =.*17*) and work experience (*F* (4, 193) = 3.42, *p* = .01, η² =.*07*), but not in extracurricular activities and resume presentation. Furthermore, age was a significant covariate when testing for ethnicity effects in job suitability ratings (*F* (1, 196) = 21.21, *p* = .00, η² =.*10*). Because there were significantly more minorities with an academic major in law, we also controlled for academic major in an additional analysis, which did not change main findings. Furthermore, additional analyses were done in which both age and sex were controlled for. No differences were found.

Hypotheses and Research Question

The main goal of the study was to investigate whether Western ethnic majorities and non-Western ethnic minorities differed in reported resume characteristics (i.e., academic performance, work experience, and extracurricular activities). The first hypothesis stated that non-Western ethnic minority entrants would report less *academic performance* on their resumes compared to their Western ethnic majority counterparts. The results supported this hypothesis, *F* (7, 190) = 2.25, *p* = .03, η² = .08. On a more specific level we found that ethnic minorities tended to report their study grades less often, *F* (1,196) = 3.02, *p* = .08, η² = .*02 (see Table 4 for* descriptives of all items). Note that this does not necessarily imply that the study grades of ethnic minorities are lower than those of ethnic majorities; they only are absent somewhat more often on ethnic minorities' resumes. Indeed, additional analyses of variance showed no differences in reported GPA, *F* (1, 42) = .00, *p* = .96. The results also showed that the ratings on reported language skills of ethnic minorities tended to be higher compared to the Western ethnic majority, *F* (1, 196) = 3.03, *p* = .08, η²= .01. Finally, the results confirmed that ethnic minorities report fewer organizational internships *F* (1, 196) = 8.41, *p*= .00, η²= .04.

Table 3
Descriptives of Study Variables Regarding Resume / Applicant Characteristics for Ethnic Majorities and Ethnic Minorities

	M	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Resume/ Applicant characteristics									
Age of applicant	24.56	2.00	--	-.19	.39**	.14	.07	.09	.34*
Sex of applicant	.65	.48	-.40	--	-.08	-.19	-.04	.09	-.05
Academic performance	2.22	.54	.35**	-.10	(.85)	.30**	.30**	.21*	.60**
Work experience	2.22	.45	.17	-.15	.44**	(.62)	.27*	.14	.49**
Extracurricular activities	1.79	.74	.13	-.03	.31**	.32**	(.83)	.09	.44**
Resume presentation	3.05	.58	.08	-.02	.28**	.14	.05	(.32)	.48**
Job suitability	3.20	.75	.27**	-.15	.57**	.48**	.41**	.41**	(.60)

Note. Values above the diagonal are for resumes of non-Western ethnic minorities; values below the diagonal are for resumes of Western ethnic majorities. Intra-class correlations are presented on the diagonal (averaged across ethnic minority and majority resumes). * $p \leq$ .05; ** $p \leq$ .01

The second hypothesis stated that non-Western ethnic minority entrants would report less *work-related experience*s compared to their Western ethnic majority counterparts. The results supported Hypothesis 2, *F* (4, 193) = 3.10, *p* = .02, η²= .06 (Table 4). On a more specific level, a significant difference in work experience between the minority and majority resumes was found regarding reported supervisory positions, *F* (1,196) = 5.38, p= .02, η² = .03. A similar near-significant result was found for individual achievements, *F* (1,196) = 3.56, *p* = .06, η²= .02 (Table 4). Ethnic minorities received somewhat lower ratings on these resume characteristics than their Western ethnic majority counterparts.

Overall, we found support for Hypothesis 3, *F* (6,191) = 2.92, *p* = .01, η²= .08: Non-Western ethnic minorities reported less *extracurricular activities* compared to their Western ethnic majority

counterparts. More specifically, non-Western ethnic minorities reported fewer memberships of social student associations: $F_{(1,196)} = 6.55$, $p = .01$, $\eta^2 = .03$, and fewer elected offices: $F_{(1,196)} = 9.55$, $p = .00$, $\eta^2 = .05$ (see Table 4).

Table 4
Descriptives and Results of Analysis of Variance for Ethnic Majority/Minority Resume Characteristics

	Ethnic majority M (SD)	Ethnic minority M (SD)	F	η^2
Academic performance	2.3 (0.52)	2.2 (0.55)	$F_{(7, 190)} = 2.25$*	.08
Work experience	2.3 (0.49)	2.2 (0.40)	$F_{(4, 193)} = 3.10$*	.06
Extracurricular activities	1.9 (0.81)	1.7 (0.63)	$F_{(6, 191)} = 2.92$*	.08
Resume presentation	3.1 (0.59)	3.0 (0.57)	$F_{(3,194)} = 1.11$	.02
Job Suitability	3.3 (0.72)	3.1 (0.77)	$F_{(1, 196)} = 4.39$*	.02
Academic performance				
States academic major	3.0 (0.69)	2.9 (0.89)	1.53	.01
Presents study grades/GPA	1.6 (0.91)	1.4 (0.71)	3.02†	.02
Has computer experience	2.4 (1.13)	2.6 (1.07)	1.80	.01
Knows foreign languages	2.7 (1.10)	2.9 (1.04)	3.03†	.01
Has listed courses	1.8 (0.99)	1.8 (1.07)	.05	.00
Has international experience	1.9 (1.09)	1.9 (1.09)	.04	.00
Has held an organizational internship	2.4 (1.07)	2.0 (1.14)	8.41**	.04
Work Experience				
Has work experience	3.2 (0.70)	3.3 (0.63)	2.01	.01
Has held supervisory positions	1.6 (0.76)	1.3 (0.65)	5.38*	.03
Worked part-time while in college	2.8 (0.67)	2.7 (0.77)	.66	.00
Exhibited individual job achievements	1.5 (0.69)	1.3 (0.49)	3.56†	.02
Extracurricular activities				
Was member of professional societies	2.1 (1.10)	1.8 (0.95)	2.41	.01
Listed activities in professional societies	2.1 (1.15)	1.8 (0.94)	3.30†	.02
Was member of social student association	1.9 (1.05)	1.6 (0.84)	6.55*	.03
Listed activities in social student association	1.9 (1.08)	1.5 (0.80)	8.39**	.04
Held elected offices	2.1 (1.08)	1.6 (0.89)	9.55**	.05
Volunteered for community activities	1.5 (0.77)	1.6 (0.94)	1.75	.01
Resume presentation				
Has made grammatical or type errors (-)	1.6 (0.79)	1.8 (0.86)	2.43	.01
Has a clear layout	3.8 (0.97)	3.7 (0.93)	.33	.00
Has a consistent style	3.8 (0.93)	3.7 (0.92)	1.11	.01

Note. Age was controlled for in all analyses. On one resume, however, age was missing and therefore $N = 199$. $df = (1, 196)$ unless noted differently. † $p < .10$, * $p \leq .05$; ** $p \leq .01$.

As regards our *Research Question*, no significant differences were found between ethnic majorities and minorities regarding resume presentation characteristics that were not directly content-related, such as layout, typo's and/or grammatical errors and style, $F_{(3,194)} = 1.11$, $p = .25$.

Finally, Hypothesis 4 stated that non-Western ethnic minority entrants would receive lower *job suitability* ratings when compared to their Western ethnic majority counterparts, due to differences in reported resume content. It was supported that ethnic minorities received lower job suitability ratings when compared to the Western ethnic majority resumes, $F_{(1,196)} = 4.39$, $p = .04$, $\eta^2 = .02$ (Table 4).

Table 5
Hierarchical Regression Analyses for Recruiters' ratings of the Presence of Applicants' Resume Characteristics Predicting the Applicants' Job Suitability Rating.

Variable	β		
	Step 1	Step 2	Step 3
Step 1: controls			
Applicant age	.30**	.11*	.11*
Applicant sex	-.05	-.01	-.03
Applicant ethnicity	-.14*	-.06	-.03
Step 2			
Academic performance		.38**	.31**
Work Experience		.25**	.23**
Extracurricular Activities		.22**	.22**
Step 3			
Resume Presentation			.31**
R^2	.12	.48	.57
ΔR^2	.12	.36	.09
Adjusted R^2	.11	.46	.55
Overall F	8.70**	29.36**	36.07**

Note. Sex is coded as follows: 0 = male, 1 = female. Ethnicity is coded as follows: 0 = Western ethnic majority, 1 = non-Western ethnic minority. Additional analyses were done in which recruiter characteristics were entered as controls (recruiters' implicit prejudice, sex, experience). In line with the results of the preliminary analysis on rater effects no differences were found.
* $p \leq .05$; ** $p \leq .01$.

To exclude any potential effect of subtle ethnic cues in the applicants' resumes (like applicants' ethnic affiliations), we conducted additional analyses in which Western ethnic majority resumes were compared with non-Western ethnic minority resumes that did not contain any ethnic cue (e.g., specific language skills, ethnicity related affiliations, $n = 38$). This rendered equal or even larger effects, resulting in larger differences in job suitability ratings, $F_{(1,135)} = 10.14$, $p = .00$, $\eta^2 = .07$ ($M_{ethnic\ majority} = 3.3$, $SD = .72$; $M_{ethnic\ minority} = 2.9$, $SD = .82$).

In line with previous research, it was found that these job suitability ratings were predicted by the applicants' reported resume content on academic performance, work experience and extracurricular activities. In addition, we tested the influence of resume presentation. The results of the hierarchical regression analysis are presented in Table 5.

In the first step the applicants' ethnicity, age, and sex were entered as a control, in the second step the three resume content dimensions were entered and in the final step resume presentation was added. Additional analyses were done in which recruiter characteristics were entered as controls (recruiters' implicit prejudice, sex, experience). In line with the results of the preliminary analysis on rater effects no differences were found. The results showed that the applicants´ age was a significant predictor ($\beta = .11$, $p = .04$). Applicants´ ethnicity was also a significant predictor in the first model (after Step 1 $\beta = -.14$, $p = .05$), but not anymore in the subsequent models ($\beta = -.03$, $p = .26$), when academic performance, work experience and extracurricular activities were added to the equation (after Step 2 $\Delta R^2 = .36$, $p = .00$). Table 5 also shows that resume presentation was a significant incremental predictor of job suitability ratings (after Step 3 $\Delta R^2 = .09$, $p = .00$).

Discussion

The present study confirmed the expectation that differential job access of highly educated non-Western ethnic minority job entrants can partly be explained by the way they present themselves in their resume. Specifically, we found significant differences between the ethnic minority compared to ethnic majority resumes in organizational internships, supervisory positions, membership of social student associations and elected offices. Ethnic minorities scored significantly lower on all these resume items than Western ethnic majorities. These small but significant differences led to lower job suitability ratings for ethnic minorities.

These findings could be attributed to the fact that non-Western ethnic minorities have less human capital compared to Western natives (Te Nijenhuis, De Jong, Evers, & Van der Flier, 2004), which may also be related to their lower socio-economic background (Coleman, Jussim, & Kelley, 1995). However, and because socio-economic status in terms of educational degree was controlled for in our study (i.e., applicants all held a master degree from university), it may well be that non-Western ethnic minorities presented themselves less effectively in their resumes to the recruiters (i.e., less *reported* human capital). That is, ethnic minority applicants might be equally suitable for jobs but simply less able to impress recruiters through their resumes. This may be crucial as far as recruiters tend to infer certain personality characteristics and employability ratings on the way applicants present themselves in resumes (Cole et al., 2009), instead of real achievements.

Even though the reported differences were small, it is important to note that in high stake job selection non-Western ethnic minority graduates may not make it to the next selection phase based on their resume characteristics. Even more, it can be hypothesized that the small but noticeable differences at job entry level might exacerbate throughout the rest of the career. This may hold especially for ethnic minorities, since research has suggested that ethnic minority employees have to rely mainly on their human capital credentials for career advancement, whereas ethnic majority employees have more access to the support and network of powerful in-group supervisors to advance their career (Siebers, 2009; Wilson, Sakura-Lemessy, & West, 1999). Since workplace discrimination has been reported, with ethnic minorities in general receiving less supervisory support and less access to

organizational resources (Greenhaus & Parasuraman,1993; Siebers, 2009), it can be hypothesized that ethnic minorities may find themselves in an increasingly disadvantaged position.

In our research, actual content differences were found in real resumes of ethnically diverse applicants. No differences were found on presentation aspects that are not directly content related, such as layout and grammar. The largest ethnicity effects were found in reported extracurricular activities. Ethnic minorities reported less extracurricular activities compared to Western ethnic majorities. Studies in the United States demonstrated that African American students and Asian Pacific or Hispanic/Latino students feel less strongly that they 'fit-in' on their campus than white American students (Hurtado, 1994; Hurtado & Carter, 1997; Johnson et al., 2007; Meeuwisse, Severiens, & Born, 2010b). In a study by Read, Archer, and Leathwood (2003) the 'non-traditional' students in terms of class, maturity and ethnicity felt most alienated by academic culture. Zepke and Leach (2005) argue that these students often have negative experiences, such as 'a lack of socialization', 'difficulty making friends', and 'alienation'. Student associations in the Netherlands are generally open to all graduate students enrolled in an academic program, but if students feel that they do not 'fit in' (Meeuwisse et al., 2010b; Thomas, 2002), for example because their social and cultural practices are felt to be inappropriate, they may be more inclined to self select-out when considering the membership of a social student organization or other extracurricular activities that are related to 'mainstream' campus life.

Because personal data information was masked and because the recruiters' prejudice was controlled for, it can be suggested that (reported) human capital is a valid explanation for differential job access. Even more so, because excluding resumes with ethnicity cues rendered equal or larger effects, it can be concluded even more firmly that differences in resume content can be considered as the explanatory variable.

This does not imply, however, that hiring discrimination can be dismissed as an explanatory variable. It may be that forms of hiring discrimination occur well before graduation. The results showed that ethnic minorities reported significantly less organizational internships, which may be explained by hiring discrimination at this early career stage (Dolfing & Van Tubergen, 2005). Indeed, the effect size of the implicit prejudice of our recruiter participants sample, as measured by the IAT, was large ($d = 1.43$). In real life selection procedures, ethnic cues, such as name and place of birth of the applicant, are usually present. This may trigger (implicit) prejudice and lead to hiring discrimination (De Beijl, 2000; Derous et al., 2009). Differential job access of ethnic minority graduates may be reinforced because of the way they present themselves in their resumes (i.e., less reported human capital), which in turn may elicit ethnic prejudices that lead to hiring discrimination by recruiters.

In addition to the hypothesis testing, we investigated inter-rater reliabilities (intra-class correlations; ICCs) for each of the resume aspects to assess how consistently recruiters assessed the resumes. For some of the resume characteristics, the inter-rater reliability appeared to be fairly low. Especially striking are the moderate and low intra-class correlations on work experience and resume presentation. Although these resumes were rated by professionals, the act of resume-screening may be rather unstructured and idiosyncratic (Cole et al., 2009). Recruiters may differ significantly, for example, in their

attention to spelling and grammar during resume screening. Also, it is possible that some recruiters have had more training/formal experience than others, resulting in lower intra-class correlations on some aspects (Dipboye, Fromkin, & Wiback, 1975). The amount of formal training as an explanation could be investigated to a further extent.

Intra-class correlations, however, might also reflect cultural bias to some extent. Specifically, inter-rater reliability differed significantly across ethnic minority and majorities on certain resume aspects, such as extracurricular activities. For the extracurricular activities the ICC's of ethnic minorities were lower than those of the Western ethnic majorities. It is possible that ethnic minorities´ resumes may be more atypical in the eyes of the recruiters when compared to resumes of Western graduates, who may more easily report their individual achievements, variety of work activities and experiences due to cultural differences. Research has shown that Western organizations typically have cultures that emphasize individual achievement, competition and rationality (Stone & Stone-Romero, 2004, Syed, 2008). Consequently, job suitability is considered higher for individualistic and achievement oriented applicants (Syed, 2008). Non-western ethnic minority applicants, particularly those from collectivist societies, who represent themselves in their resumes may be disadvantaged by this. Cultural differences have also been found on individuals´ beliefs about their socially desirable traits (i.e., self-enhancement; Heine & Hamamura, 2007), with North American/Western individuals self-enhancing more than other non-Western individuals. Falk, Heine, Yuki, and Takemura (2009) state that a genuine belief that one has socially desirable traits will make one's self-advertisement more attractive and effective towards the desired other party (e.g., employers). These cultural differences in self-enhancement may be related to differences in self-presentation in the resumes of ethnic minority and majority applicants.

Additionally, it is possible that because recruiters are more acquainted with resumes from 'mainstream' Western majority graduates (i.e., they still screen more resumes from natives than ethnic minorities on a daily base), it may be more difficult for them to put any difference (e.g., ethnicity related affiliations) into perspective when rating the applicants' resume.

Limitations, Implications and Directions for Further Research

Generally, our findings seem consistent with the idea that differential job access can be partly explained by the way non-Western ethnic minorities present themselves in their resumes. In an early phase of their educational career, educational institutions and career counselors could make non-Western ethnic minority students aware of activities that help improve their labor market position. An important question that remains, however, is whether there is an *actual* or merely *reported* lack in ethnic minorities' human capital factors: Some achievements may simply enough not be adequately reported upon or just lacking in resumes. Our study focuses on what recruiters receive and how the content can explain job suitability ratings. In this study (as in reality), recruiters do not know whether activities are lacking or simply not reported upon. In other words: applicants might only get what recruiters see. Unfortunately we were not able to contact the graduates in our study, because (for privacy reasons) we only had access to the masked resumes. However, it would be interesting to investigate the reasons for not reporting human capital indicators, such as extracurricular activities, on resumes.

Career counselors could focus on empowerment and presentation skills in case of reported human capital deficits to increase the chance of favorable employability ratings upon resume screening. Additionally, counselors could raise awareness among ethnic minority students to participate in activities that help improve their professional qualifications in case of actual human capital deficits.

Even though it was not specifically studied here because personal data information was masked, a possible explanation for differential job access is hiring discrimination (De Beijl, 2000; Derous et al., 2009). In future research, both hypotheses (human capital and discrimination) could be taken into account simultaneously to explain differential job access.

Note that we investigated resumes of recently graduated ethnic minorities/majorities. Because the group of non-Western student applicants is diverse (e.g., comprises both immigrants and exchange students of various nationalities), future studies could investigate differential effects regarding the students' status. For instance, non-Western exchange students might be extremely well-educated compared to their immigrant counterparts. Note that we only considered resumes of immigrant students, because human capital as well as hiring discrimination issues might work out differently for both groups. For entry-level positions, academic performance, organizational internships and extracurricular activities may be the most important sources of information for recruiters, whereas for mid-career positions work experience may become more important. Future research could investigate whether (relevant) work experience at later career stages may exacerbate or, alternatively, alleviate some of the observed differences at the graduate level.

Also, the generalizability of our findings may only hold for Dutch recruiters and recent graduates. Future studies could consider cultural differences in the way recruiters screen resumes in addition to cultural differences in the way applicants present themselves in their resumes. Although we urge for replication in other/larger samples, we believe our study findings are interesting for hiring organizations in countries that are becoming increasingly pluralistic and multinationals that screen resumes for a cultural diverse workforce.

In conclusion, there is a global trend that the workplace is rapidly becoming more multicultural (Herweijer, 2009; Shen, Chanda, D'Netto, & Monga, 2009) and resumes are one of the most important tools when initially screening applicants (Arnulf et al., 2010; Cole et al., 2009). We studied resume characteristics (academic performance, work experience, extracurricular activities, and resume presentation) using actual resumes of ethnic minority and majority entrants, which has not been done before. Specifically, we could find only one study that investigated extracurricular activities (Van Gent et al., 2006). This observation may add to the ongoing societal and scientific debate about human capital deficits and hiring discrimination in Western countries.

In this study, evidence was found for the hypothesis that differences in reported human capital can explain differential job access of ethnic minority and majority applicants. Interestingly, inter-rater agreement differed for minority and majority resumes on some aspects, indicating that both applicant and recruiter characteristics should be taken into account.

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Fairness Perceptions of Video Resumes Among
Ethnically Diverse Applicants*

Abstract

This study investigated ethnic majority and minority applicants' fairness perceptions ($n = 445$) of video resumes, compared to paper resumes. Additionally, the moderating effect of minorities' ethnic identity and language proficiency on fairness perceptions of video/paper resumes was studied. Despite discriminatory concerns, ethnic minority applicants perceived the fairness of video resumes equally or more positively when compared to ethnic majority applicants, and when compared to paper resumes. Minorities' ethnic identity was positively related to fairness perceptions of resumes. Furthermore, language proficiency was a significant moderator: Higher proficiency was related to higher fairness perceptions of paper resumes. The implication is suggested that ethnic minority applicants may prefer a more personalized way of applying (video resume), instead of less personalized ways.

The increased use of technology and internet in screening procedures (Sylva & Mol, 2009) has resulted in the emergence of so-called 'video resumes'. Video resumes are video-taped messages in which applicants present themselves to potential employers (Doyle, 2010). The popularity of video resumes is reflected in an increasing use of and media attention to video-based applications, both in the United States and Europe (Gissel, Thompson, Pond, & Meade, 2011; Wichink Kruit, 2010). Instead of merely turning paper-and-pencil resumes into videotaped versions, multimedia allows applicants to actually show their knowledge, skills, abilities and other characteristics (e.g., interpersonal competencies) that may be difficult to capture with traditional paper resumes. Video resumes might offer applicants the opportunity to show their potential more than paper resumes do, due to additional visual and auditory information. This may be particularly so for those who want to demonstrate their skills (e.g., creativity). Other factors that might contribute to the applicants' adoption of video resumes are increased applicant convenience to use multimedia when applying and (possibly) their positive perceptions of multimedia applications. With the study presented here, we will be among the first to investigate applicants' perceptions of video resumes, thereby adding to the literature on the use of multimedia in recruitment and assessment procedures.

This study particularly investigates whether video resumes are perceived as fair by applicants. Applicant perceptions have been identified as an important theme in the adoption of new technology in selection (Lievens & Harris, 2003). Yet, relatively little research has been done on between-group preference differences for using internet-based application procedures (Garcia-Izquierdo, Aguinis, & Ramos-Villagrasa, 2010), among which the video resume can be categorized. Given demographic evolutions, such as increasing ethnic diversity as a result of globalization and immigration (De Beijl, 2000), it is important to know more about the way applicants, and ethnic minority applicants in particular, perceive the fairness of video resumes. Aside from demographic evolutions, knowledge on the perceptions of ethnic minority applicants is particularly important because legal concerns have been raised with the use of video resumes (Lefkow, 2007). Information on ethnicity, sex, age and disability are revealed at an early stage of the selection process, which could lead to accusations of discrimination and lawsuits. There is empirical evidence that e-recruitment practices that are perceived as unfair and intrusive lead to negative applicant reactions, possible legal action and a tendency to 'self-select out' (Anderson, 2011). It is not known, however, how the fairness of video resumes is actually perceived by ethnically diverse applicants.

The study presented here therefore is, as far as known, the first one that focuses on the way applicants, and ethnic minority applicants in particular, perceive the fairness of video resumes compared to paper resumes. Because fairness may not target every (minority) applicant in the same way, we will additionally investigate potential moderating effects of applicants' ethnic background, ethnic identification, and language proficiency. Before turning to this issue, we will take a closer look at characteristics of video resumes.

Video Resumes

The format of a video resume can vary from a video-taped message to a multimedia message, including animations and text. An example of the use of video resumes is the recruitment program that was launched in Australia, inviting applicants to send a 60 seconds video message to demonstrate their creativity and skills for a marketing job. No less than 34.000 applicants responded (Queensland Tourist Board Australia, 2009). Additionally, a growing number of companies are offering services that range from online hosting of video resumes in search databases for recruiters, to the full production of resumes for applicants. A search conducted by Gissel et al. (2011) for the keywords "video résumés" on popular Web sites yielded 10,900 hits on youtube.com and 49,300,000 on google.com. Since then, it appears that the topic has only gained popularity in the popular press and media, which contrasts with the paucity of published empirical research in the Web of Science (Derous, Taveirne, & Hiemstra, 2012).

The initiative to use video resumes in the procedure can come from the applicant (Gissel et al., 2011) or the employer. When the hiring organization is setting the rules for video resume applications, the format requirements can be more or less structured. For example, employers may ask applicants to present themselves by answering standardized questions (Clooks, 2011). This afore mentioned format, which is highly structured, may be more closely related to the interview (i.e., a 'web based video interview') instead of the resume. Although the initiative to apply with a video resume can vary (taken by the applicant or demanded by the employer), as well as the format of a video resume (unstructured vs. highly structured; videotaped vs. multimedia), the introduction of auditory and visual information of the applicant in the early screening phase is the common denominator, which differentiates video resumes from paper resumes. This growing use of video resumes is not (yet) reflected, however, in empirical research on e-recruitment.

Applicant Perceptions of Video Resumes

Besides the psychometric side of selection procedures, researchers have also studied the social-motivational side of personnel selection (e.g., Anderson, Born, & Cunningham-Snell, 2001). This is reflected in the large body of research on applicant perceptions of commonly used selection instruments (e.g., Anderson, Salgado, & Hulsheger, 2010), such as written resumes. Applicant perceptions have been identified as an important theme in the adoption of new technology in recruitment and selection too (Ryan & Ployhart, 2000). However, the literature on applicants' perceptions of innovative hiring tools naturally is relatively scarce when compared to the more traditional testing tools (see for some notable exceptions: Chan & Schmitt, 1997; Oostrom, Born, Serlie, & Van der Molen, 2010; Sylva & Mol, 2009; Wiechmann & Ryan, 2003). However, and to the best of our knowledge, applicant reactions towards video resumes have not been investigated yet.

Hausknecht, Day and Thomas (2004) mentioned five reasons why it is important for organizations to study applicant perceptions, among which perceived organizational attractiveness and propensity to initiate legal action. These reasons are reflected in the majority of research on applicant justice perceptions as based on Gilliland's model (1993). Gilliland (1993) states that the overall perceived fairness of the selection process is influenced by the applicants' procedural justice perceptions (i.e.,

whether applicants perceive the selection procedure as fair, in terms of job relatedness and opportunity to perform) and their perceptions of distributive justice rules (i.e., whether applicants receive the hiring decisions they feel they deserve, such as equity and equality). The present paper focuses on overall fairness and procedural justice perceptions of video versus paper resumes of applicants who went through an application training (see method section). Creating a video resume and subsequently applying with it is part of the initial phase of a selection procedure. Typically, during this phase, any interaction of the applicant with the hiring organization (related to distributive justice) is rather low. The present paper, therefore, focuses on perceived procedural justice.

Research by Chan and Schmitt (1997) showed that new selection techniques such as the video-based SJT are regarded more positively by applicants compared to more traditional paper-and-pencil versions in terms of overall fairness (i.e., job relevance). Overall, simulations seem to elicit more favorable examinee reactions than paper-and-pencil measures. Similarly, Richman-Hirsch, Olson-Buchanan and Drasgow (2000) showed that applicants perceive multi-media tests as more fair compared to traditional paper-and-pencil or computerized tests. It appears, therefore, that innovative types of selection tools do not necessarily lead to negative applicant perceptions (Bauer, Truxillo, Paronto, Weekley, & Campion, 2004). They can even lead to more favorable perceptions compared to the traditional screening methods (Richman-Hirsch et al., 2000). Given applicants' positive reactions towards multimedia techniques and given that video resumes are a multimedia application of paper resumes, we expected that:

Hypothesis 1a. Applicants will perceive video resumes as more fair than paper resumes.

Generally, resumes are perceived favorably by applicants, although work sample tests and interviews are perceived even more favorably (Anderson et al., 2010). One of the main reasons for this is the perceived job relatedness of these tools. Job relatedness is defined as the extent to which a test appears to measure content relevant to the job situation and appears to be predictively valid (Gilliland, 1993). Future job-relevant behavior may be showed more directly in video resumes compared to paper resumes, much like a work sample test and interview, and therefore video resumes may be perceived as more job-related than paper resumes. Furthermore, because video resumes are multimedia applications of paper resumes and because multimedia applications are often perceived to be higher on job relevance, we expect video resumes to be perceived as higher on job relatedness (face validity and predictive validity) than paper resumes:

Hypotheses 1b/1c. Applicants will perceive the face validity (H1b) and the predictive validity (H1c) of video resumes as higher when compared to paper resumes.

Social influence theory (Levy, Collins, & Nail, 1998) states that every interpersonal relation is directed towards some sort of social influence. During a job interview, for example, applicants may try to elicit favorable impressions from the interviewer. Based on the social influence theory, it can be expected that the applicant will use self-presentation tactics in order to achieve this (Barrick, Shaffer, & DeGrassi, 2009). Although video resumes do not facilitate direct interaction, it can be hypothesized that the format allows for more self-presentation compared to the paper resume (e.g., professional

appearance), and thus allows for more opportunities to perform and to show one's competencies to recruiters (Waung, Beatty, Hymes, & McAuslan, 2012). We therefore hypothesized that:

Hypothesis 1d. Applicants will perceive the opportunity to perform in video resumes as higher when compared to paper resumes.

Ethnicity Effects in Applicant Perceptions of Video Resumes

In Western countries, the odds for rejection are significantly higher for ethnic minority applicants compared to ethnic majorities, even when all job qualifications are equal (Derous, Nguyen, & Ryan, 2009). Research in the Netherlands, where the present study was conducted, has shown that differential job access is largest among non-Western ethnic minorities compared to native Dutch ethnic majorities, and particularly so for Turkish and Moroccan immigrants (Dagevos, Gijsberts, & Van Praag, 2003). Secondly, Turkish and Moroccan applicants, compared to other large non-Western ethnic minority groups, report being the most discriminated against when looking for a job (Andriessen, Dagevos, Nievers, & Boog, 2007). Therefore, due to this relatively weak labor market position, ethnic minority applicant perceptions as hypothesized may hold particularly for this group of applicants.

Because lower labor market outcomes for ethnic minorities (particularly so for Turkish and Moroccans in the Netherlands) may partly be explained by actual job discrimination during recruitment and selection (Derous, Ryan, & Nguyen, 2012) and because ethnic minorities may perceive selection procedures as being less fair compared to their majority counterparts (e.g., Chan & Schmitt, 1997) we expected that:

Hypothesis 2. Ethnic minority applicants (Turkish/Moroccans in particular) will perceive both video resumes and paper resumes as less fair than ethnic majority applicants, in terms of overall fairness (H2a), perceived predictive validity (H2b), face validity (H2c), and opportunity to perform (H2d).

Ethnic minorities, however, might be better off with video resumes compared to paper resumes. Specifically, video resumes may allow applicants to illustrate their individual job-related competencies and past experiences in a more direct way than through paper resumes. Research has consistently shown that paper resumes are highly vulnerable to social categorization and ethnic discrimination (Bertrand & Mullainathan, 2004). Therefore, ethnic minorities may welcome alternatives for paper-based screening. Because applicants are able to provide a more personalized and competence-based picture of themselves (individuation) in video resumes, ethnic minority applicants may actually perceive video resumes as more fair than paper resumes despite the fact that more ethnicity related cues can be revealed at the earliest screening phase. Following this prediction (e.g., Quinn, Mason, & Macrae, 2010) we expected that:

Hypothesis 3. Ethnic minority applicants (Turkish/Moroccans in particular) will perceive video resumes as more fair when compared to paper resumes, in terms of their overall fairness (H3a), perceived predictive validity (H3b), face validity (H3c), and opportunity to perform (H3d).

Ethnic identity. In a research context, ethnicity is typically based on socio-demographic categories such as country of origin and birth country of a person's parents (Central Bureau of Statistics [CBS], 2010). While useful, this approach does not take into account that ethnicity can mean different things to individuals who are categorized into the same group (i.e., a psychological approach). Ethnic identity is recognized as a multi-faceted construct that allows for a greater degree of interpretation of behavioral patterns of individuals within a cultural group (Phinney & Ong, 2007). As such, ethnic identity may be a more informative construct when studying ethnicity related antecedents of applicant perceptions and it was therefore included in this research.

Ethnic identity can be described as an enduring, essential aspect of a persons' social identity that stems from his/her knowledge of membership of an ethnic group and associated feelings with that membership (Phinney, 1996). Therefore, ethnic identity can be considered a part of one's social identity (Tajfel & Turner, 1986). A strong ethnic identity is related to high self-esteem and other self-image factors (Smith & Silva, 2011), which may influence a person's behavior and perceptions. Phinney (1992) suggests that individuals who are further along in their identity development process view ethnic group membership as more salient and have a clearer understanding of how ethnic group membership contributes to their sense of self. As a result, ethnic minorities who identify highly with their ethnic group may be more comfortable expressing their ethnic heritage than hiding it (Linnehan, Chrobot-Mason, & Konrad, 2006). In applicant perception research, one's ethnic minority identity is considered to be related to higher perceived discrimination, which may result in a higher propensity to case initiation (Anderson, 2011; Operario & Fiske, 2001). At the same time, research has shown that ethnic identity strength diminishes the extent to which minorities are impacted by discrimination, acting as a protective resilience factor (Smith & Silva, 2011).

Ethnic identity becomes particularly salient when perceptions of unfair bias against ethnicity occur (Herriot, 2004). In the first screening phase, the interaction with the hiring organization is generally low and ethnic minorities' fairness perceptions of applying with a video resume (procedural justice) may be more related to self-esteem factors (higher comfort in expressing one's cultural heritage), than to discrimination perceived in advance (higher sensitivity to prejudiced treatment; distributive justice). Considering the possible effect of ethnic identity on comfort in expressing one's ethnicity in multimedia applications, we expected that:

Hypothesis 4. Minorities' ethnic identity strength moderates the fairness perceptions of video versus paper resumes in such a way that videos will be perceived as more fair compared to paper resumes but particularly so when ethnic minorities identify more strongly with their ethnic in-group.

Language proficiency. Language skills have been found to be related to the ability to meet daily needs in society for ethnic minorities (Lindert, Korzilius, Van de Vijver, Kroon, & Arends-Toth, 2008), such as job search self-efficacy and labor market outcomes in the context of employment (van Tubergen, 2010). As such, host country language skills are considered to be important socio cultural outcomes of acculturation. Acculturation refers to the process of changes and continuities in cultural adaptation of ethnic minorities (Berry, 1997).

In traditional application forms written language skills are important, for instance when creating a paper resume and a motivational letter. There is some evidence that learning to read and write in a second language requires more formal instruction than learning to speak the language (e.g., due to literacy requirements; van Tubergen, 2010). This would imply that immigrant applicants would experience more difficulties in creating a paper resume (possibly related to lower fairness perceptions) when compared to a video resume, because video resumes only claim upon spoken language skills. However, this would particularly hold for applicants with limited pre-immigration education (lower educated 'first generation immigrants'; van Tubergen, 2010). Many young ethnic minority applicants, however, generally went through the same formal schooling system as mainstreamers ('second generation immigrants'; De Beijl, 2000) and as such one may expect that they will have sufficient reading and writing skills in the host country language.

When applying with a video resume, possible ethnic minority applicants' accented speech is introduced at the earliest screening phase. Research has shown that accented speech, in combination with the applicants' name, negatively affects the recruiters' favorable judgments in job interviews (Hosoda & Stone-Romero, 2010). Therefore, it may be that ethnic minorities consider applying with a paper resume as more fair compared to a video resume because of the additional ethnicity related cues that are introduced at the earliest screening phase.

Given seemingly contradictory arguments as mentioned above and because it is still unknown whether ethnic minorities' proficiency of the host country language (either written or spoken) influences the fairness perceptions in paper versus video resumes, we formulated the following research question:

> *Research Question. Will ethnic minority applicants' perceived proficiency of their host country language moderate their procedural justice perceptions of video vis-à-vis paper resumes?*

In sum, video resumes are a new recruitment tool and not much is known on applicant perceptions and ethnic minority applicants' perceptions in particular. Therefore, this paper studies (a) applicant perceptions of video resumes compared to paper resumes, (b) ethnic group differences in applicant perceptions towards resumes, and (c) moderating factors of ethnic minorities' applicant perceptions, namely ethnic identity and language proficiency.

Method

Participants

Participants were applicants ($n = 445$). All were unemployed job seekers who followed an application training, provided by the local government of a large Dutch city. The mean age was 32 ($SD = 9.38$) and 58 percent was male. Almost half of the participants (47%) had secondary vocational training, 34% was educated at a lower level, 19% had a bachelor or master degree. In the Netherlands, a distinction is generally made between the four largest ethnic minority groups: Turkish, Moroccan, Surinamese and Dutch Antilleans. The sample consisted of the following ethnicities: 20% Dutch majority, 8,5% Turkish,

8,5% Moroccan, 36% Surinamese/Antillean, 22% other non-Westerners (e.g., Asians), and 5% other Western applicants (e.g., from other European countries). Most of the participants (74%) had been unemployed for less than 6 months ($n = 235$) or less than 1 year ($n = 91$). Analysis showed no significant differences in duration of unemployment between ethnic subgroups, $F (2, 434) = .60, p = .55$.

Procedure and Design

Participants were enrolled in a 2-day application training program subsidized by the Dutch government (6-12 applicants per training), to improve applicants' job-seeking skills through the creation of a personal video resume. All unemployed job seekers in the region were entitled to enroll. On Day 1 applicants were trained to identify and present their knowledge, skills, abilities and other characteristics to potential employers. This resulted in a personal script that was used as input for Day 2. On Day 1, participants were informed by the researchers about the study goals and after the informed consents were collected, participants filled out Part 1 of a questionnaire (see below) including background variables (e.g., sex, age) and some of the study measures (ethnic identity, language skills). The next day, on Day 2, participants went to a professional studio individually to tape their video resume. During the taping they were assisted by a director and a personal coach. The studio edited each recording, resulting in a personal 40-60 second video resume for each participant. Shortly after the participants created their video resume, at the end of Day 2, they filled out scale items on fairness and procedural justice for both video and paper resumes

The design of our field study was a 2 (Resume type: video vs. paper) by 2 (Ethnic group: ethnic minority vs. ethnic majority) mixed factorial design. Resume type was a within-subjects factor whereas Ethnic group was the between subjects factor. Applicants ethnic identity strength and language proficiency were introduced as moderators for the testing of Hypothesis 4 and the Research Question, which applied to ethnic minority applicants only (within subjects). Please note that when we tested differential effects of (Dutch) ethnic majority applicants versus Turkish/Moroccan ethnic minority applicants, we crossed resume type with ethnic minority group, consisting of three conditions instead of two (i.e., 'Dutch ethnic majority', 'Turkish/ Moroccan ethnic minorities' and 'Other ethnic minorities').

Measures

Unless otherwise mentioned, all Likert-type items were rated on a five-point scale (1 = *not at all applicable*; 5 = *very much applicable*).

Fairness perceptions. Overall fairness was measured with an adapted scale from Kluger and Rothstein (1993; 4 items). An example item is: "Most people would say the [video resume/ paper resume] is fair" with an alpha coefficient of .77 for paper and .82 for video resumes. Example items for procedural justice perceptions are: "It would be obvious to anyone that the [video resume/paper resume] is related to a job" (Face validity; Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993; 4 items), "I am confident that the [video resume/ paper resume] can predict how well an applicant will perform on the job" (Perceived predictive validity, Smither et al., 1993; 5 items), and "The [video resume/ paper resume] gives applicants the opportunity to show what they can really do" (Opportunity to perform,

Bauer et al., 2001; 4 items). Alpha coefficients of the procedural justice scales ranged between .71 and .87 (see Table 1).

Ethnic identity strength. The ethnic identity strength of the applicants was measured with an adapted version of the affirmation, belonging, and commitment subscale of the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992). First, participants were asked to indicate to which ethnic group they felt they belonged to. Subsequently three scale-items were presented on the perceived importance of the indicated group membership for the individual. An example item is "My (Dutch or other) identity is an important aspect of who I am". The alpha was .83.

Language proficiency. This measure on perceived language proficiency, asked about experienced difficulties in writing and speaking the Dutch language (adapted from Dinsbach & Feij, 2003; 6 items). Example items are: "Writing in the Dutch language is difficult for me", "Speaking the Dutch language is difficult for me" and "I think it is difficult to make a video resume because of the Dutch language". All items were reverse coded to reflect language proficiency. Alpha was .89.

Demographics. Finally, we also measured the applicants' age, sex, ethnicity, educational level, internet use and duration of unemployment.

Results

Descriptives and Preliminary Analysis

Table 1 represents descriptives, correlations, and internal reliabilities of study variables. Education correlated significantly with several applicant characteristics (age, time unemployed and internet use; Table 1) as well as with overall fairness perceptions of video resumes ($r = -.18$, $p < .05$), and face validity ($r = .29$, $p < .01$) in paper resumes. Education was therefore controlled for in the final analysis and it was a significant covariate in each subtest.

Hypothesis Testing

A series of Repeated Measures ANCOVAs supported Hypothesis 1a that the applicants perceived the overall fairness of the video resume as higher than those of paper resumes (Hypothesis 1a: $F(1, 429) = 23.58$, $p < .01$, $\eta^2 = .05$). The opposite effect was found for perceived predictive validity, Hypothesis 1b: $F(1, 424) = 17.79$, $p < .01$, $\eta^2 = .04$, Hypothesis 1c: face validity, $F(1, 427) = 13.06$, $p < .01$, $\eta^2 = .03$, and opportunity to perform Hypothesis 1d: $F(1, 424) = 10.87$, $p < .01$, $\eta^2 = .03$. Hypothesis 1 thus was only supported for overall test fairness and not for face validity, perceived predictive validity or opportunity to perform. These main effects, however, could be further qualified by its interaction with ethnicity.

Hypothesis 2 stated that ethnic minority applicants (Turkish/Moroccans in particular) would perceive both video and paper resumes as less fair than ethnic majority applicants. No ethnicity effects were found on perceived overall fairness of paper and video resumes (Hypothesis 2a). Significant ethnicity effects were found, however, for perceived predictive validity of the video resume (Hypothesis 2b). Yet, contrary to what was predicted, ethnic minority applicants, and Turkish/Moroccan applicants in particular, perceived the predictive validity of the video and paper resume as higher when compared to ethnic majority applicants ($F(2, 413) = 4.58$, $p = .01$, $\eta^2 = .02$; see Table 2 for mean scores).

Table 1.
Descriptive Statistics and Correlations between Applicant Characteristics and Study Variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Sex	1.42	.49	--	-.01	-.01	.08	.00	.06	.10	-.01	-.04	-.05	.03	.01	-.01	-.05	.02
2. Age	32.21	9.38	.00	--	-.16**	.16**	.27**	-.06	-.32**	.02	.15**	.04	.10	.03	.07	.00	.11
3. Education	1.85	.71	-.07	.19	--	-.18**	-.31**	.00	.14	.02	-.18**	-.05	-.20**	.20*	-.10	.06	-.13*
4. Time unemployed	1.91	1.25	.03	.28*	-.01	--	.25**	.08	-.08	.00	.03	.05	.08	-.01	-.01	-.03	.03
5. Internet use	2.02	1.07	-.13	.22*	-.25*	.16	--	-.10*	-.34**	-.03	.09	-.02	.12*	-.10	.01	-.05	.09
6. Ethnic Identity Strength	3.72	.86	.13	.00	-.17	-.10	.09	(.83)	.16*	.11*	.11*	.19**	.10	.09	.19**	.12*	.15**
7. Language proficiency	1.98	.81	.20	-.34*	-.27	-.11	.24	.22	(.88)	.04	-.12	.00	-.19**	.22**	.02	.13	-.13
8. Test fairness paper resume	3.15	.68	-.01	.08	.22*	-.08	.04	.04	.21	(.75)	.19*	.52**	.10	.41**	.07	.53**	.11*
9. Test fairness video resume	3.28	.77	-.10	-.11	-.04	-.04	.01	.06	-.04	.11	(.82)	.24**	.62**	.06	.58**	.10	.54**
10. Perceived predictive validity paper	2.94	.63	-.07	.11	.07	-.11	-.07	.03	.10	.52**	.34**	(.73)	.40**	.37**	.23**	.60**	.34**
11. Perceived predictive validity video	2.92	.73	-.14	-.05	-.14	-.17	-.01	.03	.12	.19	.65**	.42**	(.79)	.06	.46**	.19**	.69**
12. Face validity paper resume	3.69	.61	-.01	.17	.29*	.13	-.06	.13	.06	.35**	-.01	.16	.00	(.80)	.25**	.49**	.15**
13. Face validity video resume	3.61	.61	.01	.01	.14	.14	-.11	.03	-.11	.18	.37**	.21	.21	.34**	(.71)	.17*	.46**
14. Opportunity to perform paper resume	3.25	.71	-.08	.23*	.10	.06	.03	.09	.12	.53**	.02	.46**	.07	.44**	.23*	(.82)	.29**
15. Opportunity to perform video resume	3.21	.79	-.04	.02	-.11	.05	.04	.04	.20	.24*	.54**	.31**	.60**	.19	.47**	.38**	(.87)

Note. Correlations above the diagonal are for ethnic minority applicants, correlations below the diagonal are for ethnic majority applicants. Reliabilities (α) are presented on the diagonal. The variables are coded as follows: Sex (1=male, 2=female), Education (1 = vocational education, 2 = secondary vocational education, 3 = Bachelor/Master), Time unemployed (1 = less than 6 months, 2 = 6 to 12 months, 3 = 1 to 2 years, 4 = 2 to 4 years, 5 = more than 4 years), Internet use (1 = hardly ever, 2 = monthly, 3 = weekly, 4 = daily, 5 = more than once a day). N = 445 (N ethnic majority = 89, N ethnic minority = 356), except for language skills: N = 244 (N ethnic majority = 49, N ethnic minority = 195).
* p < .05, ** p < .01.

Another significant ethnicity effect was found for the face validity of paper resumes (Hypothesis 2c; F (2, 413) = 6.33, p =.00, η^2=.03). Turkish/Moroccan applicants in particular rated the face validity of paper resumes as lower compared to Dutch applicants. As regards opportunity to perform (Hypothesis 2d), a similar direction was found for paper and video resumes (F (2, 413) = 2.59, p = .08, η^2=.01; see Table 2 for mean scores). Thus, the hypothesis that ethnic minority applicants would have more negative perceptions compared to majority applicants was not supported. Minority applicants only perceived the face validity of paper resumes more negatively than ethnic majority applicants.

As regards Hypothesis 3, RM ANCOVA's showed mixed results, with a medium sized significant effect (η^2 = .12) in the hypothesized direction for face validity in the Turkish/Moroccan subgroup (H3c; Table 2). The effect sizes of the other significant results were small with the exception of medium effect sizes for test fairness in the 'other ethnic minority group' (η^2 = .06) and face validity for the Turkish/Moroccan applicants. Interestingly, a significant interaction effect between ethnicity and face validity was found (see Figure 1).

Table 2
Descriptives and Repeated Measures ANCOVA results for Fairness Perceptions of Paper and Video Resumes among Ethnic Majority and Minority Applicants

		Paper	Video	F-value	h^2 η^2
		M (SD)	M (SD)		
Test fairness	Dutch ethnic majority	3.15 (0.52)	3.13 (0.63)	F (1, 83) = 2.25	.03
	Ethnic minorities	3.16 (0.71)	3.31 (0.80)	F (1, 341) = 14.77**	.04
	a.Turkish/Moroccan	3.22 (0.75)	3.32 (0.84)	F (1, 72) = 2.97	.04
	b.Other ethnic minorities	3.15 (0.70)	3.31 (0.79)	F (1, 267) = 11.83**	.06
Perc. Predictive validity	Dutch ethnic majority	2.82 (0.59)	2.76 (0.63)	F (1, 83) = 1.85	.02
	Ethnic minorities	2.98 (0.64)	2.96 (0.75)	F (1, 336) = 8.87**	.02
	a.Turkish/Moroccan	3.05 (0.72)	3.09 (0.70)	F (1, 72) = 2.28	.03
	b.Other ethnic minorities	2.95 (0.62)	2.93 (0.76)	F (1, 262) = 4.72*	.02
Face validity	Dutch ethnic majority	3.84 (0.57)	3.55 (0.55)	F(1, 82)= .12	.02
	Ethnic minorities	3.67 (0.61)	3.63 (0.63)	F (1, 336)=15.43**	.04
	a.Turkish/Moroccan	3.49 (0.68)	3.60 (0.66)	F(1, 71)= 9.38**	.12
	b.Other ethnic minorities	3.72 (0.58)	3.64 (0.62)	F(1, 265)= 6.93**	.03
Opportunity to perform	Dutch ethnic majority	3.21 (0.65)	3.06 (0.60)	F (1, 82) = .80	.01
	Ethnic minorities	3.27 (0.73)	3.25 (0.83)	F (1, 337) = 6.71**	.02
	a.Turkish/Moroccan	3.28 (0.76)	3.34 (0.84)	F (1, 72) = 1.11	.02
	b.Other ethnic minorities	3.27 (0.72)	3.22 (0.84)	F (1, 262) = 5.57*	.02

Note. Different ANCOVA's were peformed for the different subgroups. * p < .05, ** p < .01.

Hypothesis 4 stated that minorities' ethnic identity strength would moderate the fairness perceptions of video versus paper resumes. Significant correlations were found for minorities' identity and fairness perceptions (r_{video}=.11, p < .05; r_{paper}=.11, p < .05), the perceived predictive validity of paper resumes (r = .19, p < .01), face validity of video resumes (r = .19, p < .01) and opportunity to perform of

paper and video resumes (r_{paper} = .12, p <.05; r_{video}=.15, p < .01; see Table 1). Ethnic identity, however, did not significantly moderate the ethnic minorities' perceptions of paper vs. video resumes (e.g., $F_{perceived\ predictive\ validity}$ (1, 333) = 1.10, p = .30; $F_{face\ validity}$ (1, 336) = .01, p = .91). Thus Hypothesis 4 was not supported.
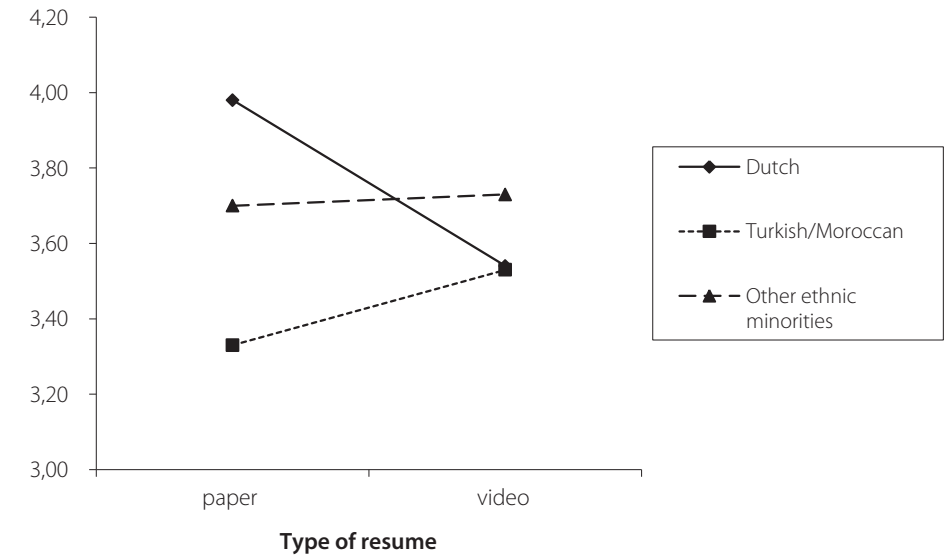

Figure 1. Interaction of ethnicity and type of resume on face validity

However, because ethnic identity correlated positively with perceptions of both paper and video resumes, post hoc analyses were performed, in which the video and paper resume perceptions of low, medium and high identified ethnic minorities were compared (i.e., Operario & Fiske, 2001). The ethnic identity categories were coded as low (25% lowest MEIM scores), high (25% highest MEIM scores), and medium (50% middle MEIM scores). A main effect was found (F (16, 648) = 1.83, p = .02, η^2 = .04). Further analysis showed that this was caused by a significant difference in the perceived face validity of video resumes (F (2, 330) = 4.53, p = .01, η^2 = .03), with higher identified ethnic minorities having higher face validity perceptions of video resumes (M_{low} = 3.53, SD = .67; M_{medium} = 3.58, SD = .57; M_{high} = 3.80, SD = .68). Similar results were found for paper resumes regarding overall test fairness (F (2, 330) = 3.29, p = .04, η^2 =.02) and perceived predictive validity (F (2, 330) = 5.00, p = .01, η^2 = .03). Thus, post hoc analyses showed that ethnic minorities who identified more strongly with their ethnic group had more positive applicant perceptions of both video and paper resumes, F (16, 648) = 1.83, p = .02, η^2 = .04.

As regards our research question on language proficiency as a possible moderator of ethnic minority applicant perceptions: Ethnic minorities' perceived host country language proficiency correlated positively with face validity (r =.22, p <.01) and opportunity to perform (r =.13, p <.10) of paper resumes, and it correlated negatively with test fairness (r = -.12, p <.10), perceived predictive validity (r = -.19, p <.01), and opportunity to perform (r = -.13, p < .10) of video resumes (see Table

1). Apparently, higher host country language proficiency is related to more positive perceptions of the paper resume than of the video resume. This is in line with the correlations of educational level and several of the study measures. Indeed, language proficiency was a significant moderator when introduced as a covariate for ethnic minorities, and Turkish/Moroccan ethnic minority applicants in particular (e.g., F (1, 184) = 4.27, p = .04, η^2 =.02 for test fairness and F (1, 183) = 9.05, p = .00, η^2 =.05 for perceived predictive validity).

Discussion

The recent increased use of technology in selection has resulted in the emergence of video resumes. With this study, were are among the first to investigate applicant perceptions of video resumes, and ethnic minority applicants in particular, thereby adding to the literature on the use of multimedia in recruitment and applicant perceptions in three ways. First, our results show that video resumes are perceived as more fair compared to paper resumes, regardless of one's ethnic background. This finding corroborates with previous findings in which multi-media testing was perceived more positively compared to paper-and-pencil test (e.g., Potosky & Bobko, 2004). The results for job relatedness (face validity and perceived predictive validity) and opportunity to perform, however, were in the opposite direction. At first sight, this appears to be contradictory (i.e., higher fairness perceptions vs. lower procedural justice perceptions of video resumes compared to paper resumes). However, the testing of Hypothesis 2, which looked at between group differences, clarified these seemingly contradictory findings. Ethnic minority applicants, and Turkish/Moroccan applicants in particular, perceived the predictive validity, face validity and opportunity to perform of video resumes as equal or higher when compared Dutch ethnic majority applicants.

Taking ethnic group differences into consideration is the second contribution of this study. Studies on applicant perceptions across cultures show that paper resumes are perceived fairly equal (favorable) across countries, supporting the 'reaction generalizability' hypothesis (Anderson et al., 2010). Less is known, however, on the use and preferences of immigrants/ethnic minorities *within* countries. And virtually no research exists on perceptions of video resumes. Furthermore, knowledge on the perceptions of ethnic minority applicants is important because potential legal and discriminatory concerns have been raised with the use of video resumes (Lefkow, 2007). Interestingly, and despite these concerns, ethnic minority applicants perceived the fairness of video resumes equally or more positively when compared to ethnic majority applicants, and when compared to paper resumes. For example, the face validity of video resumes is perceived more positively compared to paper resumes by Turkish/Moroccan applicants, who suffer the most from actual employment discrimination in Dutch society. These results are interesting in the light of an on-going debate in several Western countries on the merits of applying anonymously (Born, 2010), which implies that social categorization characteristics (i.e., sex, ethnicity) are masked during screening. Video resumes can be regarded as the opposite of applying anonymously. Our results suggest that ethnic minority applicants do not perceive video resumes more negatively when compared to paper resumes, even though more personalized

information is visible through visual and auditory cues. Apparently, ethnic minority applicants perceive it as more fair to show *more* personal characteristics that are related to their ethnicity at the earliest screening phase (e.g., in a video resume), instead of *less* ethnicity related cues (e.g., applying anonymously). This supports the idea of a preference among ethnic minority applicants for a more personalized way of applying (individuation), instead of a de-personalized application because of possible hiring discrimination. Ethnic minority applicant perceptions were moderated, however, by perceived host country language proficiency.

The Role of Ethnic Identity and Language Proficiency

As a third contribution to the literature we explored possible moderators of ethnic minority applicant perceptions, namely ethnic identity and perceived language proficiency. Post hoc analyses showed that ethnic minorities who identified more strongly with their ethnic group showed more positive applicant perceptions of both video and paper resumes. It may be that ethnic identity strength is related to a more positive perception of selection instruments in general, for instance due to its relation with overall psychological well-being.

Language proficiency moderated the ethnic minorities' applicant perceptions. We infer from this that for some applicants, video resumes are perceived more beneficial than for others, e.g., for those who a have a weaker labor market position due to lack of limited host country language proficiency, or for those who need a way to compensate for a lack of official skill certificates. This is important for theoretical reasons as well as for practical reasons, like coaching applicants how best to present themselves in the recruitment phase.

Limitations and Implications

Some caution is warranted as regards the generalizability of our findings because of the nature of the participating applicant pool. All were unemployed job seekers, who may welcome video resumes more than other (employed) applicants because of their relatively weak labor market position. For example, because video resumes allow them to compensate for limited language skills or to show acquired skills that are not formalized in education and may remain unnoticed in paper resume screening. Please note that procedural justice perceptions were related to participants' ethnic background but –in our sample- ethnicity did not relate significantly to the duration of unemployment. Furthermore, duration of unemployment did not correlate with fairness perceptions of paper and video resumes. Applicant perceptions may be more related to knowledge and skills (language proficiency, education) and attitude (ethnic identity) than to actual career outcomes (e.g., duration of unemployment). Another reason why our participants may have welcomed video resumes more than other applicants is that the training they attended focused on video resume creation. Whether participants' previous selection experiences (in general) and with resume creation (in particular) affected their perceptions was not the focus of this study and can be considered in a follow-up study. An additional possible limit to the generalizability of our findings is that the participants attended a subsidized training and it is unknown to what extent they actually used their video resume or how it may have contributed to their job

search success. Therefore, we suggest future research to focus on distributive justice as well. Lastly, the unequal subgroup sample sizes may have affected the results (i.e., the ethnic minority subgroup sample was over four times larger than the ethnic majority subgroup). Although homogeneity of variance was not violated, we urge for replication in more balanced subgroup samples if possible. Despite these potential limitations, our research has much practical value. Because of the increasing ethnic diversity of the workforce, as well as discriminatory and legal concerns, it is important to know more about how ethnic minority applicants perceive the fairness of video resumes, e.g. to avoid perceptions and accusations of discrimination. Additionally, it may help in the training and coaching of ethnic minority applicants on how to best present themselves.

Fairness perceptions, however, may differ from actual fairness. The video resume is a relatively new tool and not much is known on the actual threats and benefits for selection and this should be investigated to a further extent. Furthermore, the role of ethnic identity, perceived job discrimination (distributive justice) and the relation with litigation intentions could be researched to a further extent. Future research may also investigate contingencies, namely differential effects of verbal cues (e.g., ethnic-sounding accent), non-verbal cues (e.g., religious symbols, social stigmas), and competencies that are revealed through video resumes. In conclusion, video resumes are an upcoming recruitment tool that still needs much research to understand its potential threats and benefits, especially for ethnically diverse applicants. With this paper, we hope having contributed to this new area of research.

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3

Video And Paper Resumes: Exploring Applicants' Preferences Based on Personality And Cognitive Ability*

Abstract

This field study compared applicant perceptions of video resumes and paper resumes and examined whether personality and cognitive ability explained applicants' preferences. Actual applicants for a legislative traineeship informed recruiters about their skills and motivation in a video resume. Applicants strongly preferred paper resumes over video resumes in terms of fairness and procedural justice ($1.59 < d < 2.18$). Extraverted applicants perceived more opportunity to perform with video resumes compared to introverted applicants. Extraversion was also a positive predictor of video resume fairness perceptions whereas Emotional stability was a negative predictor. Cognitive ability related negatively to video resume fairness perceptions. Although video applications are increasingly being used, this study shows that not all applicants consider this to be a positive trend.

Recruiters and assessors increasingly make use of multimedia techniques to recruit and assess applicants for organizational entry (Lievens & Harris, 2003), including video-based situational judgment tests (SJTs), and virtual reality technology (Anderson, 2003; Sylva & Mol, 2009). Recently, the increased use of multimedia techniques in recruitment and selection has resulted in the emergence of so-called 'video resumes' (Doyle, 2010; Hiemstra, Derous, Serlie, & Born, 2012). A video resume can be described as a short videotaped message in which applicants present themselves to employers on requested knowledge, skills, abilities, and other characteristics, such as motivation and career objectives (Doyle, 2010). The format of a video resume can vary from a videotaped message to a multimedia message, including animations and text. Although the format of video resumes can vary (e.g., structure, multimedia usage), the common denominator is that auditory and visual information of the applicant is introduced in the earliest screening phase.

The use of video resumes instead of traditional paper resumes may have several advantages, such as the opportunity for applicants to show their potential more than in paper resumes due to additional visual and auditory information. Secondly, applicants might consider it to be more convenient and up-to-date to use multimedia when applying for a job compared to solely using text-based applications such as paper resumes and application forms. Despite these advantages and the growing popular media coverage, scientific research on the adoption of video resumes is still very scarce (Gissel, Thompson, Pond, & Meade, 2011; Silverman, 2012). In this paper a field study is conducted in an actual selection procedure of a legislative traineeship, in which both video and paper resumes were used.

As applicant perceptions have been identified as an important theme in the adoption of multimedia in recruitment and selection (e.g., Lievens & Harris, 2003; Ryan & Ployhart, 2000), the present study aims to extend the literature by examining applicant perceptions of video resumes. A recent study by Hiemstra et al. (2012) among lower educated unemployed job seekers showed that these applicants, and ethnic minority applicants in particular, perceived video resumes as equally or even more fair than paper resumes. But the nature of the applicant pool may have limited the generalizability of these findings. Furthermore, when consulting past research on applicant perceptions and its' determinants, it can be suggested that this research has mainly relied on student samples rather than applicant samples (e.g., Chan & Schmitt, 1997; Rynes & Connerley, 1993; Wiechmann & Ryan, 2003), limiting their ecological validity. In addition, past research on applicant perceptions of new technology has been rather descriptive and comparative (e.g., Hausknecht, Day, & Thomas, 2004; Rynes & Connerley, 1993). At the same time, there have been several calls for research regarding the determinants of applicant perceptions, including stable individual difference variables (e.g., Chan, Schmitt, Sacco, & DeShon, 1998; Ryan & Ployhart, 2000). Therefore, the goals of the present study are twofold. The first goal is to study applicant perceptions of video resumes compared to paper resumes in an ecologically valid setting, namely among highly educated actual applicants applying in a high-stakes selection setting. The second goal is to explore the role of personality and cognitive ability as determinants of perceptions of video and paper resumes in an actual selection procedure.

Applicant Perceptions

Knowledge on how applicants perceive selection procedures can be important for organizations (Hausknecht et al., 2004), for example because they have been found to be related to intentions to accept the job offer, intentions to recommend the organization to others, the propensity to initiate legal actions, and to perceived organizational attractiveness (e.g., Chan & Schmitt, 2004; Ryan & Ployhart, 2000). Furthermore, favorable applicant perceptions appear to guide the employers' choice of selection methods to a large extent (König, Klehe, Berchtold, & Kleinmann, 2010).

A major impetus for much of the research on applicant perceptions has been Gilliland's (1993) procedural and distributive justice model, which outlines several situational factors and individual differences that are proposed to affect applicants' procedural justice perceptions. Procedural justice perceptions (Gilliland, 1993) are for example characterized by the extent to which a test appears to measure content relevant to the job (face validity) and appears to be predictively valid (perceived predictive validity), and appears to provide enough opportunity to show one's skills and competences (opportunity to perform).

Research on applicant perceptions of new technology in selection, and video resumes in particular, is still scarce. Yet research by Chan and Schmitt (1997) showed that applicants seem to prefer a new technique with which they are less familiar (i.e., a video-based SJT) over the traditional technique (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. These findings have been attributed to the novelty of multimedia testing (Wiechmann & Ryan, 2003) and to its enhanced realism (Chan & Schmitt, 1997). Thus, it appears that innovative types of selection methods, such as video resumes, can lead to more favorable perceptions compared to the traditional selection methods, such as paper resumes, with which the applicant is more familiar (Richman-Hirsch et al., 2000).

Based on social influence theory (Levy, Collins, & Nail, 1998), it can be expected that applicants will use self-presentation tactics in order to achieve favorable impressions from the recruiter (Barrick, Shaffer, & DeGrassi, 2009). It can be hypothesized that the video resume format allows for more self-presentation compared to paper resumes (e.g., professional appearance), and will evoke more favorable procedural justice perceptions. As an additional feature, video resumes provide candidates the opportunity to be seen and heard by recruiters, instead of merely being read about in a paper resume. Indeed, Furnham and Chamorro-Premuzic (2010) stated that '..candidates above all believe that it is desirable (and fair) to be seen and heard by the selectors' (p. 422). In sum, we therefore expect that:

Hypotheses 1. Applicants will perceive the fairness of video resumes as higher when compared to paper resumes (i.e., in terms of overall fairness, face validity, perceived predictive validity and opportunity to perform).

Determinants of Applicant Perceptions

Only a few studies have examined the effects of individual differences on applicant perceptions from Gilliland's (1993) procedural and distributive justice model (see for exceptions Bernerth, Feild, Giles, & Cole, 2006; Oostrom, Born, Serlie, & Van der Molen, 2010; Truxillo, Bauer, Campion, & Paronto, 2006). This small number of studies is surprising given the consistent calls in the literature to include individual differences in applicant perceptions research (e.g., Chan et al., 1998; Ryan & Ployhart, 2000) and the consistent finding that individual level factors such as cognitive ability (e.g., Schmidt & Hunter, 1998) and personality (e.g., Barrick & Mount, 1991) are related to a large array of work-related outcomes, including test performances.

Personality. The few studies on the relation between personality traits and applicant perceptions have shown the following results. Bernerth and colleagues (2006) showed that Agreeableness and Openness to experience were positively associated with procedural and distributive justice perceptions regarding the use of a leadership test, whereas Neuroticism was negatively associated with the distributive justice perceptions of the test. Truxillo et al. (2006) found that Emotional stability and Agreeableness were the most consistent predictors of applicant perceptions of a multiple choice test in the first step of a multiple-hurdle procedure of police recruits. And a recent study by Oostrom et al. (2010) showed that Agreeableness, Emotional stability, and Openness to experience were positively related to procedural justice perceptions of a cognitive ability test. Openness to experience was also positively related to procedural justice perceptions of a multimedia SJT. Contrary to the other personality characteristics, Openness to experience accounted for additional variance in justice perceptions of both instruments over and above age, gender, job experience, test experience, and self-assessed performance. These results are in line with an earlier study by Wiechmann and Ryan (2003), who also found a positive relationship between Openness to experience and the face validity of a computerized in basket exercise.

The results described above regarding the correlates of applicant perceptions concerned a variety of selection instruments (i.e., a leadership test, a multiple choice test, a cognitive ability test, and a multimedia SJT). We therefore expect Agreeableness, Emotional stability, and Openness to experience to be positively related to the fairness perceptions of paper and video resumes:

Hypothesis 2a. Agreeableness, Emotional stability, and Openness to experience will be positively related to the fairness and procedural justice perceptions of paper resumes and video resumes.

An important inference in the study by Oostrom et al. (2010), however, was that relationships between personality dimensions and procedural justice perceptions of one selection method cannot necessarily be generalized to other selection methods. It is likely that people with certain personality traits will prefer certain selection methods over other methods, based on the constructs the methods intent to measure (e.g., interpersonal skills) or their medium (e.g., paper vs. multimedia).

A distinct characteristic that differentiates both video and paper resumes from other selection instruments is that resumes are created by the applicant, as opposed to selection tests that are created by test developers (e.g., SJT's or cognitive ability tests). Because extraverted people tend to be sociable, expressive, and attention seeking (Costa & McCrae, 1992), we expect that extraverts would perceive

video resumes, in which they can audibly and visually present themselves, more positively than introverts. However, extraversion may only play a minor role in the procedural justice perceptions of paper resumes as paper resumes appeal less to presentation and interpersonal skills. Based on this line of reasoning, we formulate the following hypothesis:

Hypothesis 2b: Extraversion is more positively related to the fairness and procedural justice perceptions of video resumes compared to paper resumes.

Cognitive ability. The role of cognitive ability as a potential determinant of applicant perceptions has hardly been examined (see for two exceptions Reeve & Lam, 2007; Viswesvaran & Ones, 2004). Cognitive ability is one of the most dominant individual level factors associated with a large array of work-related behaviors and outcomes, such as promotions and extra-role behaviors (e.g., Ng & Feldman, 2010; Reeve & Lam, 2007; Schmidt & Hunter, 1998). It is therefore likely that cognitive ability may also affect applicant perceptions of assessment tools.

Viswesvaran and Ones (2004) found that cognitive ability was positively related to the importance that applicants placed on selection system content. The selection system content measure addressed among other things (e.g., invasiveness and fakability) the job relatedness and objectivity of the selection system. Reeve and Lam (2007) argued that test takers' general reasoning ability is a common antecedent to both performance and non-ability factors, such as applicant perceptions. They found intelligence to be positively related to the perceived fairness of a cognitive ability test and suggested that cognitive ability can explain a significant proportion of fairness perception variations, via the self-serving bias hypothesis. This implies that poor-performing individuals develop negative perceptions of a selection test to reduce ego threat, whereas high-performing individual with high abilities evaluate a selection test more favorably as part of a self-enhancing mechanism (Chan et al., 1998).

It may be proposed that paper resumes are more '*g*-loaded' due to the more 'objective' emphasis on actual and academic achievements, whereas video resumes may appeal more to presentation and interpersonal skills. Following the self-serving bias hypothesis and the argument that cognitive ability is a general antecedent for applicant perceptions (cf. Reeve & Lam, 2007; Viswesvaran & Ones, 2004), we therefore hypothesize that:

Hypothesis 3. Cognitive ability is positively related to applicants' fairness and procedural justice perceptions of paper and video resumes, and this relationship is stronger for paper resumes than for video resumes.

Method

Participants and Procedure

A field study was conducted among 173 real applicants applying for an entry-level legislative lawyer traineeship. Applicants were recruited by the hiring organization and they applied for 12 available traineeship positions. The selection procedure was similar for all traineeship positions and consisted of a multi-hurdle procedure. The first stage of the procedure included an online application in which the applicants had to submit their paper resume, a bio data form, and a web based video resume. The video resume consisted of the answering of three standardized questions. This had to be recorded by the applicants with their own webcam (see Clooks, 2011 for a description of this type of video application). An example question was 'Could you please tell a bit more about yourself'. 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 application to the hiring organization.

After having submitted the application (consisting of the paper resume, the bio data form, and the video), the applicant received a confirmation e-mail from the hiring organization. This e-mail also contained an invitation to participate in the present research. The text stated that the hiring organization cared about their applicants' perceptions and therefore recommended participation. Furthermore, it was stated that the research and data streaming were independently organized and in no way related to the selection decisions by the hiring organization. After having given their informed consent, the participants filled out the e-survey that was included with a link in the invitation e-mail. All surveys were completed after having applied with a video and paper application, but before any feedback was given by the hiring organization. Of the 173 applicants, 104 participated in our study (response rate of 60%). Their mean age was 26 ($SD = 4.47$) and 59 % was female. All participants held a master degree in Law, except for 1 participant who was not yet graduated in Law. The average amount of work experience was 2 years ($SD = 3.11$), with a mode of less than 1 year of work experience (48%). The sample consisted of 79% Western ethnic majority applicants and 21% non-Western ethnic minority applicants. This sample mirrors the Dutch labor force with an academic major in law, which consists of 20% ethnic minority workers (Central Bureau of Statistics, 2012).

The second stage of the selection procedure consisted of a structured interview, a cognitive ability test, and a personality questionnaire. Of the initial 173 applicants, 79 were invited for this second selection round (46%). Among these 79 invited applicants were 45 participants of our study. 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. We tried to increase the available test results for our study by inviting the non-selected applicants to fill out a personality questionnaire too ($n = 94$). After having sent two reminders, only 15 participants had accepted this invitation. Their test results, however, differed significantly from the 45 selected participants on all personality dimensions (i.e., lower test scores compared to the selectees) and were therefore excluded from further analysis.

Measures

All Likert-type items were rated on a five-point scale (1 = *not at all applicable*; 5 = *very much applicable*).

Applicant perceptions. Fairness was measured with an adapted scale from Kluger and Rothstein (1993) and consisted of four items with an alpha coefficient of .64 for paper and .76 for video resumes. An example item is: "Most people would say the [video resume/ paper resume] is fair". Face validity was measured with a 4-item adapted scale from Smither, Reilly, Millsap, Pearlman, and Stoffey (1993), with an alpha coefficient of .87 for paper resumes and .77 for video resumes. An example item is: "It

would be obvious to anyone that the [video /paper] resume is related to the job". Predictive validity was measured with a 5-item adapted scale from Smither et al. (1993) with an alpha coefficient of .83 for paper resumes and .71 for video resumes. An example item is: "I am confident that the [video/ paper] resume can predict how well an applicant will perform on the job". Opportunity to perform was measured with a 4-item adapted scale from Bauer et al. (2001) with an alpha coefficient of .88 for the paper and .87 for the video resume. An example item is: "The [video/ paper] resume gives applicants the opportunity to show what they can really do".

Personality. Big Five personality traits were measured with an online 224-item personality questionnaire (Hiemstra, Op de Beek, & Serlie, 2011; for examples of other studies using this questionnaire see Oostrom et al., 2010; Van der Linden, Bakker, & Serlie, 2011). Each scale consists of 23 to 47 items. An example item for Conscientiousness is '*Strictly follows the rules'*. Construct validity and reliability of the scales were judged as sufficient for personnel selection purposes in a review by the Dutch Test Committee of the Dutch Psychological Association (COTAN, 2012). Furthermore, the scales of the personality questionnaire correlate substantially ($r = .49 - .70$) with scales of the revised NEO-Personality Inventory which were intended to measure similar constructs (Costa & McCrae, 1992). Reliabilities (alpha's) are substantial: the alpha for Extraversion = .92, for Agreeableness = .85, for Conscientiousness = .93, for Emotional Stability = .90, and for Openness to experience = .90.

Cognitive ability. The computer-based cognitive ability test was developed by a large Dutch HRD consultancy firm and consists of 30 non-verbal, figural items that aim to measure abstract analytical skills (Van Leeuwen, 2004; for examples of other studies using this test see Oostrom et al., 2010; Op de Beek, Oostrom, & Born, 2011). Each item consists of four figures and participants have to choose two figures that match these four figures, from an answer set of five options. The cognitive ability test correlates substantially ($r = .59$) with the Dutch intelligence test for non-verbal abstract reasoning skills of Drenth, a frequently used measure of cognitive ability in the Netherlands (Drenth, 1965).

Results

Table 1 presents the descriptive statistics, correlations, and internal reliabilities of all variables. Age was positively related to job experience ($r = .70$, $p < .01$). Gender and ethnicity were significantly correlated ($r = .22$, $p < .05$), indicating that there were more ethnic minority women in our sample, compared to ethnic minority men (17 women and 4 men).

Hypothesis 1, which stated that applicants would hold more positive fairness and procedural justice perceptions of video resume than paper resumes, was tested with dependent sample *t*-tests. Table 2 presents a summary of the results, including the effect sizes of the differences. Contrary to our hypothesis, the results showed that applicants strongly preferred paper resumes over video resumes in terms of fairness (paper: $M = 3.74$, $SD = 0.63$; video: $M = 2.39$, $SD = 0.71$, $t = 12.94$, $p < .01$, $d = 2.01$), face validity (paper: $M = 3.99$, $SD = 0.59$; video: $M = 2.88$, $SD = 0.79$, $t = 11.40$, $p < .01$, $d = 1.59$), predictive validity (paper: $M = 3.13$, $SD = 0.69$; video: $M = 1.93$, $SD = 0.54$, $t = 14.31$, $p < .01$, $d = 1.94$), and opportunity to perform (paper: $M = 3.49$, $SD = 0.7$; video: $M = 1.94$, $SD = 0.54$, $t = 15.40$, $p < .01$, $d = 2.18$). Hypothesis 1, therefore, was not supported.

Table 1
Means, Standard Deviations, and Correlations of Study Variables

	M (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Age	26.27(4.47)	--																
2. Gender	1.6 (.49)	-.08	--															
3. Ethnicity	.21 (.41)	.15	.22*	--														
4. Extraversion	3.67 (.44)	.12	-.09	.06	--													
5. Agreeableness	3.90 (.27)	.18	-.15	.11	.54**	--												
6. Conscientiousness	4.26 (.31)	.02	-.09	.08	.40**	.61**	--											
7. Emotional stability	3.80 (.37)	-.03	-.16	.20	.43**	.43**	.50**	--										
8. Openness	3.96 (.26)	.02	-.21	.26†	.39**	.63**	.41**	.53**	--									
9. Cognitive ability	18.78 (42)	.06	.07	-.11	-.08	.11	-.18	-.32*	.12	--								
Paper resume																		
10. Fairness	3.74 (.63)	-.04	.00	-.12	.10	.03	.00	.15	.09	.19	(.64)							
11. Face validity	3.99 (.59)	-.07	-.05	-.13	.09	.23	.10	.21	.23	.23	.71**	(.87)						
12. Perc. pred. validity	3.13 (.69)	-.04	-.02	.02	.02	.06	.08	.09	.03	.10	.70**	.57**	(.83)					
13. Opp. to perform	3.49 (.70)	-.05	.03	.04	.16	.12	.08	.27†	.21	.03	.54**	.48**	.64**	(.88)				
Video application																		
14. Fairness	2.40 (.71)	-.10	-.02	-.06	-.01	-.28†	-.28†	-.16	-.25†	-.36*	-.26**	-.18	-.15	-.10	(.76)			
15. Face validity	2.88 (.79)	.06	.08	-.02	.10	-.31*	-.20	-.18	-.22	-.25†	-.08	-.01	-.06	.01	.68*	(.77)		
16.Perc.pred. validity	1.93 (.54)	-.06	-.04	.02	.13	-.15	-.11	-.14	-.24	-.24	-.04	-.07	.05	-.14	.63**	.50**	(.71)	
17. Opp. to perform	1.95 (.72)	.04	-.02	.10	.32*	.00	-.12	-.04	-.12	-.31*	-.24*	-.21*	-.15	-.05	.64**	.53**	.57**	(.87)

Note. Reliabilities (alpha's) 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). $N = 104$, except for personality and cognitive ability ($n = 45$). † $p < .10$, * $p < .05$, ** $p < .01$.

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As regards Hypothesis 2, on personality as a potential determinant of applicant perceptions, Table 1 shows that for paper resumes the fairness and procedural perceptions were not related to any of the personality dimensions. For video resumes, personality dimensions did correlate with applicant perceptions. Agreeableness correlated negatively with face validity ($r = -.31$, $p < .05$). Furthermore, a negative trend was observed for the relationships between Agreeableness ($r = -.28$, $p < .10$), Conscientiousness ($r = -.28$, $p < .10$), and Openness to experience ($r = -.25$, $p < .10$) on the one hand, and fairness perceptions of video resumes, on the other hand. Thus, Hypothesis 2a was not supported either.

Table 2
Differences in Perceptions between Paper Resumes and Video Resumes

	Paper resume		Video resume				
	M	SD	M	SD	t	p	d
Fairness	3.74	0.63	2.39	0.71	12.94	.00	2.01
Face validity	3.99	0.59	2.88	0.79	11.40	.00	1.59
Predictive validity	3.13	0.69	1.93	0.54	14.31	.00	1.94
Opportunity to perform	3.49	0.70	1.94	0.72	15.40	.00	2.18

Note. Effect sizes are calculated by dividing mean score differences by the pooled standard deviation.
Positive *d*-values indicate differences in favor of paper resumes. $N = 104$

Hypothesis 2b, which stated that Extraversion would be positively related to the fairness and procedural justice perceptions of video resumes, was partly supported. A visual inspection of the correlations in Table 1 indicates that Extraversion is positively related to perceptions of both paper and video resumes. Yet, only the relationship between Extraversion and the opportunity to perform in video resumes was significant ($r = .32$, $p < .05$).

Hypothesis 3, which stated that cognitive ability would be positively related to applicant perceptions of paper and video resumes, and particularly for paper resumes, was not supported. The results show that cognitive ability was not significantly related to perceptions of paper resumes. Cognitive ability was negatively related to several of the applicant perceptions of video resumes, and correlated negatively with fairness perceptions ($r = -.36$, $p < .05$) and perceived opportunity to perform ($r = -.31$, $p < .05$). A similar near significant result was observed for face validity ($r = -.25$, $p < .10$). Steiger's z – test indicated that the relationships between cognitive ability and fairness perceptions and face validity perceptions of video resumes were stronger than the relationships between cognitive ability and the fairness perceptions ($r = .19$, $p = .21$, $z = 2.29$, $p < .05$) and face validity perceptions ($r = .23$, $p = .13$, $z = 2.20$, $p < .05$) of paper resumes.

Additionally, a stepwise multiple regression was used for exploratory model building (Field, 2005). Because of the relatively small sample size a basic model was tested, predicting Overall fairness (i.e., a composite measure of fairness and procedural justice perceptions; Chan et al., 1998; Oostrom, Bos-Broekema, Serlie, Born, & Van der Molen, 2012), in which only ethnicity was entered as a control variable in the first step (based on the near significant correlation with openness to experience, $r = .26$, $p = .08$,

and previous research on ethnically diverse applicant perceptions of video resumes by Hiemstra et al., 2012). Step 2 included the individual differences which could affect the overall fairness perceptions for paper and video resumes. In line with the results of the hypotheses testing, the regression analyses showed that overall fairness perceptions of paper resumes could not be predicted by individual differences ($R^2 = .01$, $F = .33$, $p = .57$). Contrary to the paper resume perceptions, a significant amount of variance could be explained by individual differences when predicting video resume perceptions. These results for the video resumes are presented in Table 3. The stepwise procedure showed that cognitive ability, Emotional stability and Extraversion explained a significant amount of variance in the Overall fairness perceptions of video resumes ($R^2 = .31$, $F = 4.42$, $p = .01$).

Table 3
Hierarchical Regression Model Testing for the Association of Individual Differences and Overall Fairness of Video Resumes

	β	t	R^2	ΔR^2	ΔF
Step 1 – Control variable					
Ethnicity	.16	1.16			
			.02	.02	.74
Step 2					
Cognitive ability	-.46	-3.31**			
			.13	.12	5.61*
Step 3					
Emotional stability	-.47	-3.02**			
			.23	.09	4.96*
Step 4					
Extraversion	.32	2.15*			
			.31	.08	4.63*
$F(4,40) = 4.42**$					

Note. Ethnicity is coded as follows: 0 = Western ethnic majority, 1 = non-Western ethnic minority. β coefficients in the overall model are presented. R^2 and ΔR^2 may appear inconsistent due to rounding. * $p < .05$, ** $p < .01$

Discussion

An important theme in the adoption of multimedia techniques in recruitment and selection is their acceptability by applicants. Although the use of video resumes instead of, or in addition to, traditional paper resumes may have several advantages, this study showed that not all applicants consider the adoption of video resumes as a positive trend. In general, paper resumes were perceived more favorably in terms of fairness and procedural justice compared to video resumes. Furthermore, it was found that in general applicants' personality and cognitive ability were negatively related to their perceptions of video resumes, with an exception for Extraversion. We will discuss each of these findings in turn.

First, the expectation was that applicants would hold more positive fairness and procedural justice

perceptions of video resumes than paper resumes. In contrast with our expectation, and previous findings regarding new selection techniques (e.g., Chan & Schmitt, 1997; Richman-Hirsch et al., 2000), applicants showed a strong preference for the traditional paper resume over the modern video resume in terms of fairness and procedural justice (i.e., large effect sizes were found). Brockner, Ackerman, and Fairchild (2001) have argued that the more familiar an applicant is with the selection procedure, the more legitimate the procedure will appear. As paper resumes are the most often used selection instrument (Piotrowski & Armstrong, 2006), future research may test this as a possible explanation for the present findings.

Second, results partly supported our expectations on personality dimensions as a correlates of applicant perceptions. For video resumes, personality dimensions correlated with applicant perceptions, but only partly in the hypothesized direction. Especially the negative relationship between Openness to experience and applicant perceptions of video resumes was in contrast with previous findings regarding the relationship between personality and perceptions of modern selection instruments (Oostrom et al., 2010; Wiechmann & Ryan, 2003). A possible explanation may be the ecologically valid research context of our study. In contrast to previous studies, this study was done in an actual high-stake selection situation, in which the competitive nature and outcome uncertainty may have overruled most of the individual predispositions that were observed in earlier studies (i.e., applicants may have preferred the familiarity of the well-known paper resume). Moreover, exploratory model building showed that Emotional stability was positively related to overall fairness perceptions of video resumes. This is in line with pervious findings (Bernerth et al., 2006; Truxillo et al., 2006; Oostrom et al., 2010), indicating that Emotional stability may be a more structural predictor of applicant perceptions of new instruments in high-stake selection situations than Openness to experience.

A second possible explanation for the negative relation between Openness to experience and fairness perceptions is related to the characteristics of the selection instrument. In this study, the video resume format was highly pre-structured (i.e., the applicants were only allowed to make three statements on pre-defined topics, within a limited amount of time). These restrictions may account for the generally negative perceptions of video resumes, and in particular for the negative relation between personality and video resume fairness/ procedural justice perceptions. The instrument differs substantially from other innovative multimedia tests that have been described in previous research (e.g., a multimedia SJT). Our study strengthens the idea that relationships between personality dimensions and procedural justice perceptions of one selection method cannot be generalized to other methods.

Interestingly, Extraversion showed positive relationships with perceptions of video resumes. Additionally, our study showed that Extraversion positively predicted overall fairness perceptions of video resumes. Because video resumes appeal so strongly to presentation skills - especially the format that was used here in which only two takes were allowed before the applicant had to send his/ her message - it may be that extraversion is a relatively strong antecedent of fairness perceptions of video resumes in high-stake selection situations. Recruiters should realize that extraverted applicants may prefer video resumes over introverts. This may 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 video resume applications (i.e., they may be more comfortable with expressing and presenting themselves though a video message), compared to more introverted applicants.

For paper resumes the applicants' perceptions were not related to any of the personality dimensions. Research has shown that paper resumes are internationally the most widely used (Piotrowski & Armstrong, 2006) and one of the best accepted selections instruments (e.g., Hausknecht et al., 2004; Moscoso & Salgado, 2004; Nikolaou & Judge, 2007). It may well be that individual factors cannot explain paper resume perceptions due to the high levels of diffusion and general acceptance of this instrument among both applicants and recruiters.

Finally, we expected that cognitive ability would be positively related to applicant perceptions of paper and video resumes, and that this relationship would be stronger for paper resumes than for video resumes. The results showed that cognitive ability is not related to perceptions of paper resumes. However, cognitive ability was negatively related to several of the applicant perceptions of video resumes (fairness, face validity, and opportunity to perform), in a similar way compared to the personality – perception correlations. In other words, applicants who scored high on cognitive ability had more negative perceptions of video resumes than applicants that scored relatively lower on cognitive ability. This is a striking findings due to the relative homogeneity of the sample (i.e., all but one participants held a master degree in Law and applied for an entry level position). A recent study on video resumes has shown that lower educated applicants prefer video applications when compared to higher educated applicants (Hiemstra et al., in press). In this study, it was concluded that video resumes may be particularly appealing to applicants who have a weaker labor market position (i.e., Silverman, 2012). Educational level was homogenous in the current sample, but cognitive ability still accounted for significant differences between subjects. Following Viswesvaran and Ones (2004), a possible explanation may be the selection system content: Applicants with higher cognitive ability place more importance on objectivity and job relatedness of selection systems. In our sample, general perceptions of the job relatedness of video resumes were negative compared to paper resumes and this perception may therefore be even stronger for applicants with a high cognitive ability.

Limitations, Implications and Further Research

The video resume is a relatively new instrument and not much is known about it as yet. The format and content of this type of instrument can vary substantially. In this study, the video resume format was pre-defined and these format characteristics may have accounted for the relatively negative perceptions. For example, applicants who created a free format video resume (resembling a video-taped 'elevator pitch') perceived this instrument as more or equally fair compared to paper resumes (Hiemstra et al., in press). Future research could build on the study presented here by using different video resume formats to be able to disentangle the influence of the format (e.g., content requirements, structure), the medium (paper vs. video), and individual differences (e.g., educational level, ethnicity, personality) on applicant perceptions.

Although we urge for replication in other, larger datasets, we believe that this study is highly relevant for the field of applicant perceptions and new technology for selection in several ways. First, the literature on applicant perceptions of new selection technologies, and of video resumes in particular, is still scarce and research is struggling to keep pace with developments in the field. Second, the ecological validity of this study is high because it was conducted in a real selection context with genuine applicants. Interestingly, significant individual differences between applicants' preferences were found in this relatively small sample. Therefore, and lastly, the present study extends the applicant perceptions literature by examining two key individual differences, cognitive ability and personality, to understand whether or not applicants differ in their perceptions of paper and video resumes. An improved understanding of individual differences in selection procedures is needed to inform practitioners on how to screen for a competitive workforce in a labor market that is rapidly changing due to technological and demographic developments.

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Discriminatory Effects in Video Resume Screening: Examining Recruiter Fairness Perceptions and Judgmental Biases*

Abstract

Video resume are increasingly popular in personnel selection, but discriminatory concerns have been raised about it. This study assessed actual recruiters' (n=166) fairness perceptions and judgmental biases in video and paper resume screening. As expected, recruiters perceived video resumes as less fair and as less predictively valid than paper resumes. Judgmental bias was further studied in a field experiment in which applicants' name, accent and resume format were manipulated. Video resumes did not necessarily lead to negative biases against ethnic minorities, but ratings were dependent on recruiter characteristics. Low prejudiced recruiters rewarded increased ethnic identity (name, accent) with higher job suitability ratings, whereas the opposite was found for high prejudiced recruiters. Furthermore, prejudiced individuals were more likely to perceive minority applicants' accent as foreign and as less understandable. Studying video resumes may help furthering our understanding of impression formation and judgmental biases in high-stake, real life selection situations.

Introduction

Technological advancements in recruitment and screening procedures have resulted in the increased use of 'video resumes' (Doyle, 2010). Video resumes can be described as short video messages in which applicants present themselves to employers on requested knowledge, skills, abilities and other characteristics, such as motivation and career objectives. The format of a video resume can vary from a videotaped message to a multimedia message, including animations and text. Although the format of a video resume can vary, the introduction of auditory and visual information of the applicant in the earliest screening phase is the common denominator. Concerns have been voiced about judgmental biases towards subgroups on the basis of their race, sex, age, religion, and national origin in high stakes selection (Outtz, 2009). More specifically, legal concerns have been voiced about judgmental biases towards subgroups when using video resumes (Lefkow, 2007). Not much is known, however, about the actual benefits and disadvantages of video resumes. Therefore, the aim of this paper is to study HR-professionals' perceived and actual judgmental biases in video resume screening.

Since the early nineties, employers increasingly make use of multimedia techniques to recruit and assess candidates on organizational entry (McHenry & Schmitt, 1994). Besides internet-based recruitment and testing, other technologically advanced selection methods have been introduced, including video-based situational judgment tests and virtual reality technology (Anderson, 2003). Recently, multimedia techniques are also used more frequently by applicants, for instance to present themselves to potential employers in video-taped messages (Gissel, Thompson, Pond, & Meade, 2011; Hiemstra, Derous, Serlie, & Born, in press). European and U.S. practitioners mention that job seekers increasingly use YouTube and related internet sites to present themselves professionally. This is reflected in the increasing popular media coverage on this topic (e.g., Silverman, 2012)

Whereas paper resumes may contain some visual information (e.g., a picture), video resumes uniquely introduce auditory information at the first screening phase. With their speech styles, applicants reveal much about themselves that may influence impression formation (Rakic, Steffens, & Mummendey, 2011). Another unique characteristic of video resumes is the introduction of visual and auditory information without direct interaction. As such, it is differs from employment interviews, which are characterized by a more dynamic interaction between the assessor and applicant. For instance, in the face-to-face interview, applicants can adapt their impression management techniques to the interviewer, but this is not possible in video resumes. Thus, with video resumes visual and auditory information is introduced at the earliest screening phase (distinguishing the instrument from paper resumes), but it is introduced statically and without direct interaction (distinguishing it from employment interviews). As such, video-resumes may offer more personalized information about a candidate than paper resumes. Until now, however, little is known about how recruiters react to video-resumes, particularly when considering ethnic minorities. This paper adds to the literature on resume-screening in three different ways.

First, with regard to the adoption of new technology in selection, Lievens and Harris (2003) identified equivalence and adverse impact as two main themes that need to be taken into consideration. Various selection tools, such as cognitive ability tests (Outtz, 2009) have been scrutinized for adverse impact.

Yet the more ubiquitous tool of resume-screening is less investigated (Derous, Ryan, & Nguyen, 2012), and this accounts particularly for video resumes, which have hardly been researched (Waung, Hymes, Beatty, & McAuslan, 2012). A first goal of the present research is to fill this gap.

Second, the visual domain has been studied intensively in selection situations (e.g., physical attractiveness, body weight, clothing; Barrick, Shaffer, & DeGrassi, 2009), leaving the auditory domain relatively under researched (Gluszek & Dovidio, 2010a). An interesting exception is a study by Purkiss, Perrewé, Gillespie, Mayes, and Ferris (2006). They showed that applicant ethnic accent, combined with an ethnic-sounding name, negatively influenced recruiter impressions and decisions in an interview. The second goal of the research presented here is to add the literature on the auditory domain in personnel selection, by studying the role of applicants' accent in video resume screening.

Third, because of its applicant-focused agenda, the literature remains almost mute on the perceptions of significant stakeholders, such as recruiters, towards new selection instruments (see for exceptions: Costa et al., 2011; Derous, 2007). This is remarkable since personnel selection is a two-way process. Therefore, and in sum, this research focuses on recruiters' perceived fairness and actual judgmental biases in video resume screening.

Perceived Fairness in Resume Screening

The majority of research on applicant justice perceptions is based on the model of Gilliland (1993; Hausknecht, Day, & Thomas, 2004). Gilliland (1993) states that the overall perceived fairness of selection processes is influenced by the applicants' procedural justice perceptions (i.e., whether applicants perceive the selection procedure as fair, such as in terms of perceived job relatedness and opportunity to perform) and their perceptions of distributive justice rules (i.e., whether applicants receive the hiring decisions they feel they deserve, such as equity and equality).

Recent research has suggested that ethnic minority applicants in particular perceive video resumes as more fair when compared to paper resumes (Hiemstra et al., in press). However, the way applicants perceive selection tools might differ from how recruiters perceive such tools. Research has shown that applicants seem to value transparency and the opportunity to perform, whereas recruiters prefer objectivity (Derous, 2007). Therefore one might expect recruiters to be more cautious to use video-taped materials compared to paper resumes, for example due to perceived subjectivity of video-taped materials and –hence- vulnerability to discrimination accusations (Anderson, 2011; Lefkow, 2007).

Although video resumes are quickly being adopted, the instrument is not (yet) as widely diffused in the field as paper resumes. Little is known, for instance, about applicants' reactions towards the video resume. König, Klehe, Berchtold, and Kleinmann (2010) showed that professionals' choice of selection procedures depends mainly on applicant reactions, costs, and diffusion in the field and to a lesser extent on predictive validity, self-promotion, and perceived legality. Due to the newness of video resumes and unknown applicant perceptions as well as the perceived vulnerability of this instrument to accusations of discrimination (König et al., 2010; Lefkow, 2007), we propose that:

Hypothesis 1. Recruiters will perceive video resumes as less fair when compared to paper resumes (in terms of overall fairness, perceived predictive validity, face validity and opportunity to perform).

Actual Fairness in Resume Screening

Perceived fairness may differ from actual fairness (Anderson, 2011). Resumes are one of the most frequently used tools when initially screening applicants (Cole, Feild, Giles, & Harris, 2009). It has been demonstrated that recruiters may infer impressions of applicants' abilities and other attributes from resume data that go beyond the reported achievements and experiences to decide on an applicants' employability (Brown & Campion, 1994; Cable & Gilovich, 1998; Cole et al., 2009). For instance, Cole and colleagues (2009) have shown that inferences by recruiters of applicants' personality characteristics were generally incorrect, with a modest exception for the judgment of applicants' extraversion.

A troublesome aspect of subjective inferences may be that they are biased. In Western countries, ethnic minorities need more time to find a job compared to their ethnic majority counterparts (ILO, 2004). This is usually explained by minorities' lower levels of (reported) job competencies (e.g., Hiemstra, Derous, Serlie, & Born, 2012; te Nijenhuis, De Jong, Evers, & van der Flier, 2004) but also by biased decision making of majority recruiters/employers. For instance, several studies (e.g., Derous, et al., 2012; Dolfing & Van Tubergen, 2005) showed hiring discrimination upon resume-screening and this seemed to be prevalent across countries. Ethnic cues, such as ethnic-sounding names, have been evidenced as a direct antecedent of employment discrimination in resume-screening (Bertrand & Mullainathan, 2004; Derous, Nguyen & Ryan, 2009).

These studies lend support to the hiring discrimination hypothesis. Models of impression formation (Brewer & Harasty-Feinstein, 1999; Fiske, Lin, & Neuberg, 1999) might offer an explanation for this hypothesis. Impression formation models suggest that category-based information processing occurs automatically, and is particularly strong when limited individualized information is available. As in resume-screening job applicants are judged on the basis of their resume only, judgments may be formed on raters' category based stereotypes of ethnic minorities. For instance, Derous et al. (2012) showed lower job suitability ratings and hiring intentions for ethnic minority applicants during the resume-screening phase, both in lab and field settings. We therefore propose that:

Hypothesis 2. Minority applicants will be judged less suitable when compared to equally qualified ethnic majority applicants, regardless of the application form (i.e., paper or video resume).

Compared to paper resumes, video resumes contain more information richness due to additional visual and auditory cues and may therefore have a higher fidelity than paper resumes. Video resumes may also allow for more direct expressions of behavioral competency (Funke & Schuler, 1998) compared to paper resumes. Therefore, it can be argued that the information sources in video resumes provide more individuating information compared to the paper person in the paper resume. Because applicants are able to present a more personalized picture of themselves, one may argue *less* social categorization to occur in video-resume screening, because categorization is less functional for applicants about whom a great deal of individuating information is available (Quinn, Mason, & Macrae, 2009), which in turn may. Less social categorization could reduce biased decision making for minority applicants when compared to paper resumes (the *Individuating hypothesis)*.

Alternatively, video resumes may instigate hiring discrimination because characteristics non-relevant to the job are also revealed in a more direct way. Among these job-irrelevant sources of

information are applicants' attractiveness, sex, clothing, (e.g., Barrick et al., 2009; Hebl & Kleck, 2002). Additionally, it is known that ethnic identifiers, such as names and accent, can negatively influence recruiters´ perceptions (Derous et al., 2009; Hosoda & Stone-Romero, 2010; Purkiss et al., 2006), hence prompting biased decision-making. With their language and speech styles, applicants may reveal much about themselves, such as ethnic or regional background (Rakic et al., 2011), which is not revealed to the same extent when applicants apply with paper resumes only. In general, people have positive stereotypes of those who speak as they do, but negative stereotypes of those who do not speak as they do (Coleman, Jussim, & Kelley, 1995). Lindemann (2003), for instance, showed that the foreignness of an individuals' accent was sufficient to evoke negative impressions among listeners. Speakers of accented English often experience discrimination in employment (Gluszek & Dovidio, 2010b) and they are more likely to be assigned to lower status positions compared to applicants with standard speech (European Commission, 2008). An ethnic cue (e.g., name) that is paired with another ethnic minority cue (e.g., accent) may evoke a consistent stereotype, resulting in a more negative applicant evaluation (Hosoda & Stone-Romero, 2010; Purkiss et al., 2006; the *Categorization hypothesis*). Because theoretical support can be found for both lines of reasoning (i.e., individuation vs. categorization), two competing hypotheses can be formulated:

Hypothesis 3a. Minority applicants who present themselves with a video resume and have both an ethnic minority sounding name and accent will be judged equally suitable compared to equally qualified minority applicants with either an ethnic minority sounding name or accent, and when compared to their (Dutch) ethnic majority counterparts (Individuating hypothesis).

Hypothesis 3b. Minority applicants who present themselves with a video resume and have both an ethnic minority sounding name and accent will be judged less suitable compared to equally qualified minority applicants with either an ethnic minority sounding name or accent, and when compared to their (Dutch) ethnic majority (Categorization hypothesis).

Recruiter Characteristics as Moderators

Although the relationship between prejudiced attitudes and the actual behavioral expression has been debated (Blommaert, Van Tubergen, & Coenders, 2011), a recent meta-analysis has shown that the average correlation between interethnic attitudes and behavior appears to be slightly positive (Talaska, Fiske, & Chaiken, 2008). In selection, the degree to which an individual is prejudiced towards other ethnics and the expression of these prejudices may affect how ethnic minority applicants are treated. It has been shown that ethnic majorities' prejudice towards minorities, such as modern racism (McConahay, Hardee, & Batts, 1981), can be related to biased job suitability ratings. For instance, Blommaert et al. (2011) and Derous et al. (2012) reported both lab and real-life evidence for moderating effects of ethnic prejudice against Arab minorities on job suitability ratings.

Whereas these studies investigated paper resumes, we are not aware of any study that has investigated moderating effects of recruiters' ethnic prejudice on the assessment of ethnic minorities applying with video resumes. Some potential empirical evidence for discriminatory effects in video

resumes can be retrieved from studies on job interviews. In their lab study, Purkiss et al. (2006) showed negative effects of recruiters' explicit prejudice on job suitability ratings of Hispanic applicants (identified through name and accent) during job interviews. In video resumes, much like face-to-face interviews, even more non-job relevant, ethnic identification information may be exchanged than in paper resumes (e.g., through ethnic speech), which can instigate discriminatory reactions of highly ethnically prejudiced individuals. In line with the categorization hypothesis, we therefore expect that:

Hypothesis 4. The ethnic identity of applicants will interact with recruiters' ethnic prejudice in such a way that the negative relationship between the ethnic identity of applicants and job suitability judgments will be present when ethnic prejudice is high (H4a). This will be particularly so when recruiters screen video resumes: The combination of visible and audible ethnic cues (ethnic minority sounding name and accent), will lead to the most negative judgments of applicants when prejudice is high.(H4b).

Method

Participants

Participants were Dutch recruiters (n = 166; 50% males), with a mean age of 44 years (SD = 10.46). The majority of participants had a bachelor or master degree (92%), whereas 8% had secondary vocational education. They had an average work experience of 21.8 years (SD = 10.46) and all had relevant experience in screening (paper) resumes (i.e., at least 1 year of resume screening experience; M = 11.82; SD = 8.06). Branches they worked in were commercial services (33.8%), non-profit (35.1%), and industry/other profit organizations (31.1%).

Design

To assess the recruiters' fairness perceptions of video resumes versus paper resumes (Hypothesis 1), an e-survey was conducted (see Procedure). For the testing of Hypotheses 2 – 4 a field experiment was conducted using a 2 (Applicants' ethnic-sounding name: minority vs. majority) by 2 (Applicants' ethnic-sounding accent: minority vs. majority) by 2 (Resume format: paper vs. video) between subjects design. Thus, all participants rated the survey items on fairness perceptions and they rated one resume. The order of the survey items and resume-rating task was counterbalanced, to prevent sequence effects.

Procedure

Experienced recruiters were invited to participate. E-mail addresses were collected through the professional network of a large Dutch governmental organization and the network of a selection agency. To ensure that participants were blind of the study goals, the e-mail contained an invitation to participate in a study that would assess their professional opinion of video resumes as an innovative selection tool. After having read the introduction, the recruiters gave their informed consent to start the e-survey.

To ensure that all participants had a similar impression of a video resume, the survey started with a short explanation of video resumes and an illustration of a real video resume of a white male job seeker (other than the target applicant in the experimental materials). This example was a 60 second video-taped message in which the applicant told about his qualifications, strengths, personal motivation, and the type of job he was looking for. Subsequently, exploratory questions were asked about the participants' familiarity with video resumes (e.g., 'You have just received a short explanation of what a video resume is. Were you, before this explanation, already familiar with video resumes?'), the advantages and disadvantages, and the value of video resumes compared with other selection instruments (the questions were adapted from Brown & Campion, 1994). These exploratory questions were included because video resumes are a relatively new recruitment practice in the Netherlands (where this study was conducted), as well as to mask the study goals on ethnic discrimination. The participants continued with filling out Likert-type scale items on resume fairness (see Measure section).

In the experimental part of the survey, participants read a job vacancy for a junior sales position at a telecom company. The job vacancy text was adapted from existing vacancies of various telecom companies and independently checked by three senior recruiters to ensure the fidelity of the vacancy. The text provided the required educational level (secondary vocational education), five job-relevant competencies (customer orientation, working independently, commercial attitude, stress tolerance, and affinity with the telecom branch) and it stated that experience in sales would be an asset. After having read the vacancy, one fictitious resume was presented and the participants were asked to rate the applicants' job suitability. The resume (both the video and paper resume) included the following information: name, age, career objective (full-time entry-level sales position), education (secondary vocational education, specializing in sales), past employment (part-time sales employee at a media store), competencies (optimistic, sociable, ability to plan and organize, ability to deal with complaints, ability to perform under stress) and personal interests (latest technological developments). Items on perceived ethnicity (as derived from name and speech) as well as accent understandability, prejudice and demographics were also measured.

Manipulations

Following earlier social psychological linguistic research a 'matched guise technique' (Gluszek, & Dovidio, 2010a; Purkiss et al., 2006) was used. This approach implies that factors in the applications that were not related to the study goals, but could possibly influence the study results, were controlled for. The present study focused on the applicants' name and accent. To keep other factors constant, such as tone of voice, physical attractiveness, and professional appearance, the same actor performed identical video scripts while the applicants' accent and name was manipulated. The actor was instructed during the recording of the video resume to keep his gestures and facial expressions similar across the different conditions. He wore the same clothes (i.e., neutral shirt and suit) in each video resume. Casting bureaus were approached in search of a suitable actor for the applicant role. The most important criteria to select the actor were accented speech and appearance.

Applicant accent. The manner of pronunciation was manipulated, with other linguistic characteristics being equal to the standard language (e.g., grammar). As such, accent differs con-

ceptually from language competence, which represents how well one knows the language (Giles, 1970; Gluszek & Dovidio, 2010a).

The actor needed to be able to speak Dutch with a Standard Dutch accent as well as with an Arab accent. The applicant appearance needed to be credible as being Dutch as well as Moroccan, dependent on the condition. Therefore skin color (light), hair color and eye color was taken into account. The selected actor was a twenty year old Moroccan-Dutch male.

Name manipulation. The information in the paper and video resumes was identical, with the only difference being the name (and/or accent in the video resume): 'Thijs van den Berg' for the Dutch ethnic majority conditions and 'Rashid el Amrani' for the Moroccan ethnic minority conditions. To reinforce the name condition in the video resume, the applicants' name was mentioned by the applicant and inserted in text on the left hand corner. The name tag remained visible there throughout the duration of video resume. To reinforce the name condition in the paper resumes, the applicants' name was presented at the top of the resume (centered) and in the personal data information. In sum, the participants were presented with one of five conditions: a paper resume of Thijs van den Berg, a paper resume of Rashid el Amrani, a video resume of Thijs van den Berg with a standard Dutch accent, a video resume of Rashid el Amrani with a standard Dutch accent, or a video resume of Rashid el Amrani with an Arab accent. The condition of an applicant with an ethnic majority (Dutch) sounding name and an ethnic minority (Arab) accent (i.e., Thijs van den Berg with an Arab accent) was excluded due to lack of realism.

Controls. Rejection rates for migrant job applicants are believed to be higher in jobs that require contacts with external clients (de Beijl, 2000). Research has also shown that hiring discrimination is more prevalent among lower, male educated workers (ILO, 2004). Therefore, in this study a front-office job description was used, which required a lower educational level. According to the assumed characteristics theory (Coleman, et al., 1995), ethnic names and accent may also signal other characteristics than ethnicity, such as socio-economic status (SES), education, and even competence. Therefore, SES and educational level were kept constant, as well as applicants' sex (i.e., male applicants only).

Measures

Fairness perceptions. Overall fairness was measured with an adapted scale from Kluger and Rothstein (1993) and consisted of four items. An example item is: "Most people would say the [video resume/ paper resume] is fair" with an alpha coefficient of .78 for both paper and video resumes. Example items for procedural justice perceptions are: "It would be obvious to anyone that the [video / paper] resume is related to the job" (Face validity; Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993; 4 items), "I am confident that the [video / paper] resume can predict how well an applicant will perform on the job" (Perceived predictive validity, Smither et al., 1993; 5 items), and "The [video / paper] resume gives applicants the opportunity to show what they can really do" (Opportunity to perform, Bauer et al., 2001; 4 items). Internal consistencies (alpha coefficients) of the procedural justice scales ranged between .76 and .90 for both paper and video resumes (see Table 1).

Table 1
Descriptives and correlations study variables and fairness perceptions

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Sex	1.5	.50	--											
2. Age (years)	44.22	10.33	-.24**	--										
3. Education	2.4	.74	.06	.00	--									
4. Experience Resume screening (years)	11.82	8.06	-.21*	.64**	.11	--								
5. Test Fairness Video	2.80	.79	-.15	.08	-.05	.06	(.78)							
6. Test Fairness Paper	3.18	.72	.23*	-.31**	.22*	-.13	.09	(.78)						
7. Face Validity Video	3.35	.80	.05	-.07	.08	.01	.50**	.17	(.76)					
8. Face Validity Paper	3.38	.65	.20	-.22*	.14	-.12	.10	.63**	.31**	(.76)				
9. Perceived Predictive Validity Video	2.38	.72	-.21*	.08	-.05	-.01	.69**	.15	.46**	.09	(.79)			
10. Perceived Predictive Validity Paper	2.67	.68	-.03	-.13	.05	.08	.23*	.51**	.22*	.34**	.42**	(.76)		
11. Opportunity to perform Video	2.88	.90	-.04	-.01	-.06	.02	.56**	.08	.42**	.12	.60**	.33**	(.90)	
12. Opportunity to perform Paper	2.98	.70	.11	-.03	.07	.04	.05	.49**	.08	.38**	.10	.52**	.31**	(.80)

Note. Reliabilities (alpha's) are presented on the diagonal (if applicable). The variables are coded as follows: Sex (1=male, 2=female), Education (1 = secondary vocational education, 2 = Bachelor, 3 = Master, 4 = Postdoctoral). $N = 166$. † $p < .10$, * $p < .05$, ** $p < .01$.

Job suitability was measured with 3 items, using a 5-point Likert scale, adapted from Derous et al. (2009). A sample item is "Given all information you read about this applicant, how suitable do you believe this applicant is for this function?" (1 = *not suitable at all*; 5 = *very suitable*). The alpha was .87.

Prejudice. Raters' explicit prejudice was measured using an adapted form of the Modern Racism Scale (MRS; McConahay et al., 1981). The MRS was originally designed to measure prejudice against African-Americans (McConahay, 1986). Since the nineteen nineties, the MRS has successfully been adapted for use with studies not targeting African-Americans, such as Hispanic-Americans (Purkiss et al., 2006) and Arabs (Derous et al., 2009; 2012). Following a similar approach, we adapted the MRS for the target group "Moroccans". The scale consists of seven Likert-type items, such as "Moroccans are getting too demanding in their push for equal rights" (1= *disagree strongly*; 5= *agree strongly*). Alpha was .78.

Recruiter perceptions of applicant accent and ethnicity. Following Purkiss et al. (2006), the perceived applicants' accented speech was measured with one item on a 5-point Likert scale. Higher scores indicate stronger perceptions of ethnic accented speech. Perceived applicant ethnicity was also measured with one item (Purkiss et al., 2006). In the Netherlands the largest ethnic minority groups originate from Turkey, Morocco, Surinam and the Dutch Antilleans (CBS, 2010). Therefore the following categories were presented: Dutch/Western (1), Turkish (2), Moroccan (3), Surinamese (4), Dutch Antilleans (5), Other (6). Perceived ethnicity was coded as '1' for Dutch/Western ethnicity, '2' for Other ethnic minority, '3' for Arab (Moroccan) ethnic minority.

Accent understandability. People differ in their perception of the understandability of a person. To check that the manipulation was based on perceived accented speech, instead of understandability, an additional item was introduced measuring the applicant's understandability on a 5-point Likert type scale ranging from 1 (*not at all understandable*) to 5 (*very well understandable*).

Results

Table 1 presents the study means, standard deviations and correlations of the study variables for perceived fairness, whereas Table 2 presents these descriptives for actual fairness. Table 1 shows that age was negatively correlated with perceived overall fairness ($r = -.31$, $p < .01$) and face validity of paper resumes ($r = -.22$, $p < .05$). Furthermore, female recruiters considered paper resumes as more fair than males ($r = .23$, $p < .05$), whereas male recruiters perceived the predictive validity of video resumes as higher compared to females ($r = -.21$, $p < .05$). Table 2 on actual fairness showed that perceived accent understandability correlated negatively with age ($r = -.24$, $p < .05$) and ethnic prejudice ($r = -.20$, $p < .05$), indicating that older participants and those higher on ethnic prejudice were less likely to consider the applicant's speech to be understandable. Furthermore, perceived accent understandability correlated negatively with perceived foreign accented speech of the applicant ($r = -.37$, $p < .01$), indicating that participants found it more difficult to understand the applicant's foreign accent. Perceived accent understandability correlated positively with job suitability ratings ($r = .26$, $p < .01$).

Table 2
Descriptives and correlations study variables and job suitability ratings

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Sex	1.5	.50	--										
2. Age	44.22	10.33	-.24**	--									
3. Education	2.36	.74	.06	.00	--								
4. Experience Resume screening (years)	11.82	8.06	-.21*	.64**	.11	--							
5. Modern Racism	2.40	.66	-.12	.03	-.21*	-.04	(.78)						
6. Name manipulation	.62	.49	.06	-.10	.01	-.08	-.01	--					
7. Accent Manipulation	.35	.48	-.03	.15	.18	-.10	-.12	.50**	--				
8. Perceived Applicant Accent	1.63	.81	.06	.07	.07	-.12	.14	.40**	.47**	--			
9. Perceived Accent Understandability	3.98	.79	.08	-.24*	-.06	.02	-.20*	.06	-.33*	-.37**	--		
10. Perceived Applicant Ethnicity	2.10	.94	.04	-.09	-.07	-.05	.03	.58**	.23	.35**	.19*	--	
11. Job Suitability	3.62	.70	.04	.09	.00	.05	.01	-.02	-.07	-.08	.26**	.02	(.87)

Note. Reliabilities (alpha's) are presented on the diagonal (if applicable). The variables are coded as follows: Sex (1=male, 2=female), Education (1 = secondary vocational education, 2 = Bachelor, 3 = Master, 4 = Postdoctoral), Name manipulation (0 = Dutch-sounding name, 1= Moroccan-sounding name), Accent manipulation (0 = Standard Dutch accent, 1 = Arab accented speech), Perceived Applicant Accent (5-point Likert-type scale:1 = Very Dutch, 5 = Very foreign), Perceived Accent Understandability (5-point Likert-type scale: 1 = not at all understandable, 5 = very understandable), Perceived Applicant Ethnicity (1 = Dutch ethnicity, 2= Other ethnicity, 3 = Arab ethnicity). * $p < .05$, ** $p < .01$.

Preliminary Analyses

The name manipulation was successful in the three video resume conditions, $F(2, 54) = 10.23$, $p = .00$, $\eta^2 = .28$ ($M_{\text{Dutch name}} = 1.6$, $SD=.80$; $M_{\text{Moroccan name/Dutch accent}} = 2.6$, $SD=.68$; $M_{\text{Moroccan name/Moroccan Accent}} = 2.6$, $SD=.78$) and in the two paper resume conditions too, $F(1, 50) = 29.58$, $p = .00$, $\eta^2 = .37$ ($M = 1.23$, $SD=.61$; $M = 2.43$, $SD=.90$), with significantly lower means indicating the name as being perceived as Dutch. The results of an analysis of variance (ANOVA) further showed that the accent manipulation was significant in the video resume conditions $F(2, 51) = 8.06$, $p = .00$, $\eta^2 = .24$ ($M_{\text{Dutch name}} = 1.29$, $SD=.47$; $M_{\text{Moroccan name/Dutch accent}} = 1.58$, $SD=.61$; $M_{\text{Moroccan name/Moroccan Accent}} = 2.22$, $SD=.94$), with higher means indicating higher perceptions of a foreign accent. Thus, it can be concluded that our manipulations were effective.

Hypothesis Testing

Perceived Fairness. The first hypothesis stated that recruiters would perceive video resumes as less fair when compared to paper resumes. A series of Repeated Measures ANOVA's showed that recruiters perceived paper resumes as more fair overall ($F(1, 96) = 13.07$, $p = .00$, $\eta^2 =.12$; $M = 3.18$, $SD = .72$; $M = 2.80$, $SD=.79$) and as having more predictive validity when compared to video resumes ($F(1, 95) = 18.26$, $p = .00$, $\eta^2 = .16$; $M = 2.67$, $SD = .68$; $M = 2.38$, $SD =.72$). No significant differences were found as regards face validity and opportunity to perform. Thus, Hypothesis 1 was partly supported for overall fairness and perceived predictive validity.

Table 3
Hierarchical regression of job suitability on recruiter characteristics and applicant ethnicity for video resumes.

Variables	β	
	Step 1	Step 2
Controls		
Recruiter sex	-.11	-.09
Recruiter age (years)	.18	.22
Recruiter ethnicity	.02	.00
Accent understandability (AU)	.23	.26
Modern Racism (MRA)	-.03	-.03
Predictor		
Applicant Ethnicity		-.11
R^2	.08	.09
ΔR^2	.08	.01
Adjusted R^2	-.02	-.03
Overall F	.82	.76

Note. Sex is coded as follows: 1= male, 2= female. Ethnicity is coded as follows: 0 = ethnic majority, 1= ethnic minority. Accent Understandability (5-point Likert-type scale: 1 = not at all understandable, 5 = very understandable). Modern Racism (5-point Likert-type scale: 1 = very low on prejudice, 5 = very high on prejudice). Applicant Ethnicity as perceived by recruiter (0 = Dutch, 1= Other ethnic minority, 2 = Moroccan).

Actual fairness. Hypothesis 2 investigated whether minority applicants would be judged as less suitable when compared to equally qualified ethnic majority applicants, regardless of the application format. No significant differences in job suitability ratings were found ($F(4, 161) = 1.03$, $p = .39$, $\eta^2 = .03$; $3.50 \leq M \leq 3.81$; $.53 \leq SD \leq .81$), thus Hypothesis 2 was not supported.

To test Hypothesis 3, which aimed to investigate the Individuation (H3a) vs. Categorization hypothesis (H3b), recruiter age, sex, and ethnicity were entered as controls, as well as applicant understandability and recruiters' prejudice. In the second step the applicants' ethnicity as perceived by the participant was entered. The results are presented in Tables 3 - 5. Job suitability ratings in the video resume conditions were *not* predicted by the applicants' ethnicity, which rather supports the Individuation hypothesis (H3a) instead of the Categorization hypothesis (H3b).

Table 4
Hierarchical regression analyses of job suitability on recruiter characteristics, ethnicity, Modern racism, and their interaction for both paper and video resumes.

Variable	β		
	Step 1	Step 2	Step 3
Controls			
Recruiter sex	.14	.14	.13
Recruiter age (years)	.05	.05	.05
Recruiter ethnicity	.13	.13	.12
Predictors			
Applicant Ethnicity (AE)		.01	.92*
Modern Racism (MRA)		.00	.50*
AE x MRA			-1.08*
R^2	.04	.04	.10
ΔR^2	.04	.00	.06
Adjusted R^2	.01	-.01	.04
Overall F	1.26	.74	1.64

Note. Sex is coded as follows: 1= male, 2= female. Recruiter ethnicity is coded as follows: 0 = ethnic majority, 1= ethnic minority. Applicant Ethnicity as perceived by recruiter: 0 = Dutch, 1= Other ethnic minority; 2 = Moroccan. † $p <.10$, * $p < .05$, ** $p <.01$.

However, as stated by Hypothesis 4 (Tables 4 and 5), we expected the ethnic identity of the applicant to interact with recruiters' prejudiced attitudes in such a way that any negative relationship between the ethnic identity of the applicant and job suitability judgments would be present when prejudice was high (overall; H4a**)**. Applicant ethnicity, modern racism and their negative interaction received significant beta-weights (respectively $\beta = .92$; $\beta = .50$, $\beta = -1.08$).

Table 5
Hierarchical regression of job suitability on recruiter characteristics and ethnicity, Modern Racism, and their interaction in video resumes.

Variable	β		
	Step 1	Step 2	Step 3
Controls			
Recruiter sex	-.10	-.07	-.01
Recruiter age (years)	.18	.24	.26†
Recruiter ethnicity	.02	-.01	.01
Accent understandability (AU)	.24	.19	.21
Predictors			
Applicant ethnic name (N)		-.06	.74
Applicant ethnic accent (A)		-.16	1.85**
Modern Racism (MRA)		-.00	1.26**
N x MRA			-1.29
A x MRA			-3.29**
R^2	.08	.11	.30
ΔR^2	.08	.03	.19
Adjusted R^2	.00	-.04	.15
Overall F	1.02	.75	1.96†

Note. Sex: 1= male, 2= female. Ethnicity: 0 = ethnic majority, 1= ethnic minority. Accent Understandability : 1 = not at all understandable, 5 = very understandable. Modern Racism: 1= very low prejudiced, 5 = very high prejudiced. Name: 0 = Dutch-sounding name, 1= Moroccan-sounding name, Accent: 1 = Very Standard Dutch accented speech, 5 = Very Foreign accented speech. † p <.10, * p < .05, ** p <.01.

The nature of the interaction is depicted in Figure 1: Low prejudiced individuals' job suitability ratings increased when they perceived the applicant as Moroccan instead of Dutch, whereas the opposite was found for high prejudiced individuals, supporting Hypothesis 4a.
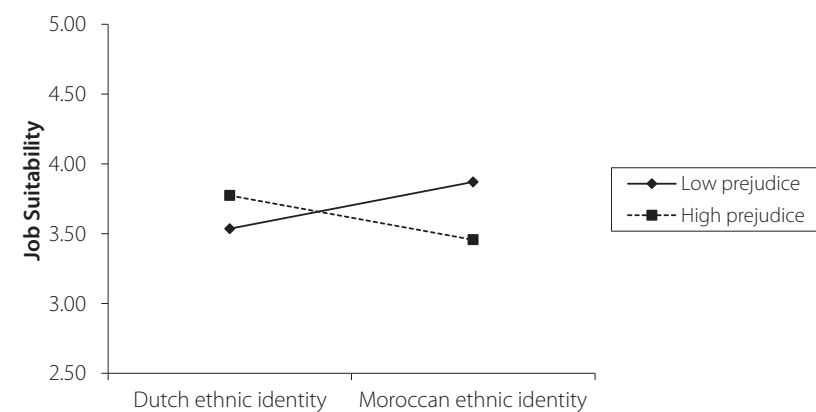
Figure 1. Interaction of applicant ethnicity (as perceived by the recruiters) and recruiters' prejudice (Modern Racism) on applicants' job suitability ratings in both paper and video resumes.

Hypothesis H4b further stated that the combination of visible and audible ethnic cues would lead to the most negative judgments of applicants when prejudice was high in video resume applications. A hierarchical regression was performed for the video resume conditions in which name, applicants' accent and recruiters' prejudice were entered in Step 2 and their interaction in Step 3. The results show that not applicants' name but applicants' accent, recruiters' prejudice and their interaction significantly predicted job suitability. The direction of the interaction is depicted in Figure 2. The pattern is similar to Figure 1, indicating that job suitability ratings became somewhat lower with higher perceptions of applicants' accented (Moroccan) speech when recruiters' prejudice was high whereas the opposite was found when recruiters' prejudice towards Moroccans was low. That is, when prejudice was low recruiters seemed to 'reward' the increased ethnic identity of the applicant with higher job suitability ratings, whereas the opposite was found when prejudice was high. Thus Hypotheses 4a and 4b were partly supported (i.e., prejudice moderated job suitability ratings).
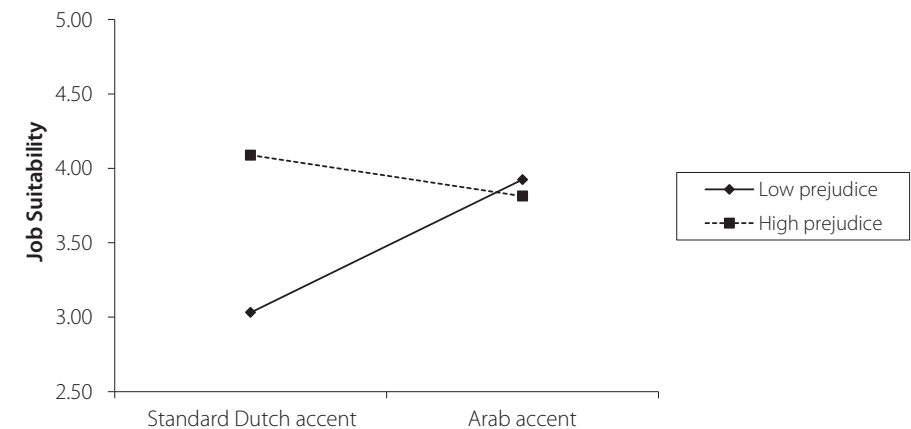

Figure 2. Interaction of applicants' perceived foreign accent (as perceived by recruiters) and recruiters prejudice (Modern Racism) on job suitability ratings in video resumes.

Discussion

Video resumes are a relatively new tool and despite their growing popularity less is known about their potential adverse impact vis-à-vis ethnic minorities and paper resumes. The overall aim of this paper, therefore, was to study recruiters' perceived fairness and actual judgmental biases in video resume screening. Results showed that recruiters perceived paper resumes as more fair and as having more predictive validity than video resumes. This is in line with the fairness concerns that have been voiced about video resumes (Lefkow, 2007). Trained decision makers tend to rely on applicants' job-relevant knowledge and experience, as well as on personality and motivation (Costa et al., 2011). Paper resumes generally contain more detailed, formal information (e.g., duration of employment, grades) which may be used as an indicator of job-relevant knowledge, when compared to statements usually

given in video resumes. This may explain the higher perceived predictive validity of paper resumes compared to video resumes. Another reason for the lower perceived predictive validity perceptions of video resumes may be due to lack of standardization. Some recruiters stated that video resumes appealed to them because of the introduction of the 'first impression' to the earliest screening phase. But it may be that most trained recruiters do not prefer an instrument that appeals to this 'gut feeling' or 'reliance on intuition' (Highhouse, 2008).

The second part of our study focused on actual fairness in video versus paper resume screening. Two competing hypotheses were suggested, namely the individuating versus the categorization hypothesis. No significant differences in job suitability ratings were found, however, for ethnic minority and majority applicants across application formats. This was not expected, given the large amount of discriminatory complaints reported from this particular minority group as well as previous study findings on hiring discrimination. On the other hand, previous research findings did not count in potential effects of video-resumes as they were all based on paper resumes, which can be considered as an information poor recruitment tool when compared to video resumes (i.e., information rich). Indeed, despite recruiters' discriminatory concerns, ethnic minority video resume applications did not automatically lead to more negative impressions of job applicants. One explanation may be that the applicant was well-suited for the job vacancy (in all conditions) and that the profiles, therefore, were rather unambiguously defined. Hence, they might have restrained Dutch recruiters from prejudiced reactions towards Moroccan applicants (Derous et al., 2012). Future research, therefore, could consider replicating our study with different types of profiles of applicants.

Another potential explanation for the similarity in job suitability ratings of ethnically diverse video resume applications may be in the unique characteristics of video resumes. Specifically, video resumes may increase the amount of exposure to ethnic minority candidates while –at the same time- restrict the amount of direct 'face-to-face' interactions between the recruiter and the applicant. It is known from previous research that intergroup contact induces social anxiety (Dovidio, Eller, & Hewstone, 2011). According to the contact theory (Allport, 1954) prejudice and related social anxiety can be *reduced* through increased exposure or intergroup contact (Pettigrew & Tropp, 2006). Interestingly, in video resume screening the recruiter is exposed to an out-group member, but no direct contact is taking place. Viewing the video resume allows for indirect or imagined contact between the recruiter and the applicant which entails a more 'safe situation' then in face-to-face interactions. Interestingly, research has shown that merely imaging an interaction between the self and an ethnic minority out-group member might reduce bias (Dovidio, et al., 2011; Husnu & Crisp, 2010). In support of the individuation hypothesis, it may well be that video resumes allow recruiters to just imagine interaction with an ethnic minority applicant, thereby reducing possible judgmental biases. The prerequisite, however, is that the recruiters need to imagine themselves interacting positively with the applicant (Dovidio et al., 2011), which was not controlled for in the present study and may be considered for further research. However, we did demonstrate that when recruiters are prejudiced towards ethnic minority applicants, existing negative stereotypes may be reinforced instead of reduced, leading to biased decisions.

Indeed, our findings suggest that rater characteristics need to be taken into account when

examining the threats and benefits of video resumes. Recruiters' ethnic prejudice towards Moroccans moderated the job suitability ratings, despite the applicants' equal qualifications: When prejudice was low the applicants' increased ethnic identity resulted in higher job suitability ratings and the opposite was found when prejudice was high. Interestingly, low prejudiced raters seemed to 'reward' increased ethnic identity with higher job suitability ratings. Future research may investigate whether these findings may be even stronger in a more ambiguous application situation (i.e., introducing applicants who are less qualified than in the current study; cf. Dovidio & Gaertner, 2000).

Strengths, Limitations, and Implications

The present paper adds to the literature on (discriminatory) resume screening in three important ways. First, we investigated video-resumes, which – despite all media attention - have not received much research attention till today. Second, we also focused on the auditory aspects (accented speech of ethnic minority applicants) that might instigate hiring discrimination, which has remained somewhat under-researched. Third, instead of focusing on applicant reactions, we also measured recruiters' perceived and actual (discriminatory) reactions towards the use of video-resumes vis-à-vis paper resume, which adds to the limited literature on recruiter perceptions. However, as with any study, several limitations should be acknowledged. The past few years, several audit studies were conducted among real recruiters in the Netherlands (e.g., Backer, 2011; Derous et al., 2012) and these received ample media attention. It might be that recruiters were sensitized for (research on) ethnic biases in resume-screening, which in turn might have influenced any prejudice effect: Low prejudiced recruiters may have put their best foot forward in showing that they did not discriminate against Arab minorities, whereas high explicitly prejudiced individuals may have been less affected by perceived social pressure. This heightened awareness through professional and media attention on hiring discrimination might also explain why recruiters' modern racism scores were moderate. Furthermore, restriction of range in prejudiced attitudes might have occurred. It may be that the influence of prejudice (in both directions) on impression formation may actually be larger in real-life situations, than in this controlled research design despite the precautionary measures that were taken to mask the study goals. And as mentioned, further research should also consider variation in job applicants' profiles as we might have created very unambiguous profiles (i.e., well-suited applicant profile for the function of junior sales representative).

The study of accented speech in video resume screening from a psychological perspective has added value to our understanding of person perception, and hence possible judgmental biases. Two recent studies in an interview setting (Hosoda & Stone-Romero, 2010; Purkiss et al., 2006), also showed judgmental biases against foreign-accented speech. Indeed some judgmental biases on speech in job interviews were replicated in our study on video resume screening. Accent appeared to be a stronger predictor of job suitability ratings, in combination with prejudice, than name. Additionally, ethnic prejudice correlated negatively with accent understandability. This finding is in line with Lindemann's (2002) work on 'listening with an attitude'. Lindemann suggests that problems of communication due to the accented speech of a non-native speaker are sometimes a result of the native speakers' own

negative attitude towards an ethnic minority group. In our study, perceived accent understandability correlated positively with job suitability ratings. Rakic et al. (2011) stated that language attitude is rather devoid of social desirability: People are much more open to reveal their 'real' attitudes when evaluating different speakers than when asked explicitly what they think about a given group. Accent discrimination, unlike other forms of discrimination, may be less obvious and – hence - less clearly rejected by society (Lippi-Green, 1994; Gluszek & Dovidio, 2010a), and therefore also less sensitive to social desirability biases.

Video resumes are a relatively new screening tool and not much is known on the actual benefits and disadvantages of this instrument for selection. With video resumes visual and auditory information is introduced at the earliest screening phase (distinguishing the instrument from paper resumes), but it is introduced without direct interpersonal interaction between candidate and rater (distinguishing it from the employment interview). These unique characteristics allow for much more research opportunities, e.g., on impression formation and categorization in real-life, high stake situations. For example, more research is needed on auditory factors in personnel selection and potential biases, such as recruiters' language attitudes and perceived accent understandability, rather than (or in addition to) ethnic prejudice. The individuation versus categorization hypothesis may be researched to a further extent as well as the contextual conditions under which it is beneficial to apply with a video resume and/or a paper resume (e.g., job status, job complexity).

In conclusion, this study is among the first to investigate video resumes from the recruiters' perspective, thereby adding to the literature on recruiter perceptions and the role of visual and auditory cues in personnel assessment. More particularly, this study aimed to provide new insights into judgmental biases (and, hence, potential adverse impact) in paper and video resume screening. Furthering our understanding of impression formation and judgmental biases is highly important and relevant to organizations, for both economic and ethical reasons. The adoption of video resumes by organizations allows for ample research opportunities in this area in high-stake, real life situations.

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Summary of Main Findings
and General Discussion

In this dissertation the perceived fairness and factors related to measured discriminatory effects in paper and video resume screening were studied. In doing so, the dissertation aimed to shed light on the existing differential job access between ethnic minority and majority job applicants, as well as to add to our understanding of the use of video resumes as a technological innovation in personnel selection. In this chapter a summary of the main findings will be provided, followed by a discussion and practical implications of the presented studies. Then suggestions for future research are described. The discussion ends with a general conclusion.

Summary of Main Findings

The studies presented in this dissertation focused on perceptions of fairness and justice (Research questions 1, 2 and 3) and on factors related to potential differential selection outcomes for ethnic minority and majority applicants in paper and video resume screening (Research questions 4 and 5). For each research question the findings will be described here. An overview of the research questions, the studies and the results is presented in Table 1.

Research Question 1: What are the fairness perceptions of paper and video resumes among ethnic minority and majority applicants?

This question was addressed in two empirical studies as described in Chapters 3 and 4. The first study (Chapter 3) investigated ethnic minority and majority applicants' fairness perceptions ($n = 445$) of video resumes compared to paper resumes. Participants were unemployed job seekers who attended subsidized application training, which resulted in the creation of a video resume. Results showed that video resumes were perceived as more fair compared to paper resumes. This finding corroborated with previous findings in which multi-media testing was perceived more positively compared to paper-and-pencil tests (e.g., Potosky & Bobko, 2004). The results for procedural justice (face validity, perceived predictive validity and opportunity to perform), however, were in the opposite direction: Paper resumes were perceived more positively on procedural justice aspects compared to video resumes. At first sight, this appeared contradictory (i.e., higher fairness perceptions vs. lower procedural justice perceptions of video resumes compared to paper resumes), but between group differences clarified these seemingly contradictory findings. Ethnic minority applicants, and Turkish/Moroccan applicants in particular, perceived the predictive validity, face validity and opportunity to perform of video resumes as equal or higher when compared to Dutch ethnic majority applicants. Thus, despite discriminatory concerns, ethnic minority applicants perceived the fairness of video resumes equally or more positively when compared to ethnic majority applicants, and when compared to paper resumes. The implication is suggested that ethnic minority applicants may prefer a more personalized way of applying (video resume), instead of less personalized ways.

In Chapter 4 Research question 1 was again studied, but now among actual applicants for a legislative traineeship. This allowed us to assess the generalizability of our findings in Chapter 3 to another context, in terms of applicant pool and video resume format (see further in this paragraph).

As a part of the selection procedure described in Chapter 4, the applicants informed recruiters about their skills and motivation in a video resume, in addition to applying with a paper resume. All but one applicant participant held a master degree in Law, they all had limited work experiences, and all applied for the same entry-level position. Contrary to the findings among ethnically diverse job seekers, the traineeship applicants strongly preferred paper resumes over video resumes in terms of fairness and procedural justice. Although video applications are increasingly being used, this study showed that not all applicants consider this to be a positive trend. Brockner, Ackerman, and Fairchild (2001) have argued that the more familiar an applicant is with the selection procedure, the more legitimate the procedure will appear. As paper resumes are the most often used selection instrument, specifically among highly educated applicants compared to less educated ones, this may be a possible explanation for the present findings in Chapter 4. A possible explanation for the contradictory findings between Chapter 3 and 4 may lie in the video resume format. In the study in Chapter 4, the video resume format was pre-defined (applicants had to answer three questions to be able to apply), as opposed to the applicants in Chapter 3 who created a free format video resume of approximately 60 seconds (resembling a video-taped 'elevator pitch'). These format characteristics may have accounted for the observed differences, because applicants who were able to create the free format video resume possibly felt more control over the end result, as opposed to the predefined format that was used in Chapter 4. Another explanation may be the different characteristics of the applicant pools: Participants in Chapter 3 were unemployed job seekers with a large variety of educational and ethnic backgrounds who attended training, whereas the participants in Chapter 4 represented a relatively homogeneous sample of entry-level, highly-educated applicants in a competitive selection procedure. The unemployed job seekers in the training may have welcomed video resumes more than other (employed) applicants because of their relatively weak labor market position. For example, video resumes may have allowed them to compensate for limited writing skills or to show acquired skills that are not formalized in educational certificates and may therefore remain unnoticed in paper resume screening (cf. Silverman, 2012).

Research question 2a: Are ethnic minority applicant perceptions of paper and video resumes influenced by their ethnic identity and language proficiency?

Perceptions of fairness become particularly salient for underrepresented groups on the labor market, such as ethnic minorities. When studying subgroup differences, it is important to take into account that ethnicity can mean different things to individuals who are categorized into the same socio-demographic group. Therefore, the influence of minorities' ethnic identity strength and perceived language proficiency on applicant perceptions was studied. Minorities' ethnic identity strength was found to be positively related to fairness perceptions of both paper and video resumes. In other words, ethnic minorities who identified more strongly with their ethnic group showed more positive applicant perceptions of both video and paper resumes. It may be that ethnic identity strength is related to a more positive perception of selection instruments in general, for instance due to its relation with overall psychological well-being (Smith & Silva, 2011). This is an interesting finding, because in the personnel selection literature it is sometimes assumed that a higher ethnic minorities' identity strength is related to higher perceptions of discrimination and related litigation intentions (e.g., Anderson, 2011; Operario & Fiske, 2001). Our results, however, showed that increased ethnic identity is related to

more positive fairness perceptions of selection tools. Furthermore, host country language proficiency (Dutch) was a significant moderator: Higher proficiency was related to higher fairness perceptions of paper resumes. We infer from this that for some applicants, video resumes may be more beneficial than for others, for example those who have a weaker labor market position due to lack of host country language proficiency. This is important for theoretical reasons as well as for practical reasons, like coaching applicants how best to present themselves in the recruitment phase.

Research question 2b: Are applicant perceptions of paper and video resumes influenced by personality and cognitive ability?

This question was addressed in Chapter 4. Of the 104 participating applicants in our study, 45 were invited to the second hurdle in the selection procedure for a legislative lawyer traineeship. All applicants applied with a paper and video resume in the first hurdle and the second hurdle consisted of a personality questionnaire and a cognitive ability test. No significant results were found for paper resume perceptions. But for video resumes, the results showed that extraverted applicants perceived more opportunity to perform with video resumes compared to introverted applicants. Extraversion was also a positive predictor of video resume fairness perceptions whereas emotional stability was a negative predictor. Because video resumes appeal so strongly to presentation skills - especially the format that was used here in which only two takes were allowed before the applicants had to send their message - it may be inferred that extraversion is an antecedent of video resume fairness perceptions in high-stake selection situations. Recruiters should realize that extraverted applicants may prefer video resumes over introverts. This may 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 video resume applications (i.e., they may be more comfortable with expressing and presenting themselves though a video message), compared to more introverted applicants.

Cognitive ability related negatively to video resume fairness perceptions. In other words, applicants who scored high on cognitive ability had more negative perceptions of video resumes than applicants who scored relatively low on cognitive ability. This is a striking finding, as the sample was relatively homogeneous (i.e., all but one participant held a master degree in Law and applied for an entry level position). The results are in line, however, with the study results in Chapter 3 among unemployed job seekers. When considering educational level as a proxy for cognitive ability, the results among the unemployed job seekers showed a fairly similar pattern: Higher educated unemployed participants perceived video resumes as less fair than lower educated unemployed participants. Furthermore, higher educated unemployed participants considered the job relatedness (in terms of face validity) of paper resumes as higher than job seekers with a lower educational level.

Following Viswesvaran and Ones (2004), a possible explanation may be that applicants with higher cognitive ability place more importance on objectivity and job relatedness of selection systems. In our legislative traineeship sample, general perceptions of the job relatedness (face validity and perceived predictive validity) of video resumes were negative compared to paper resumes and this perception may therefore be even stronger for applicants with a high cognitive ability.

Research Question 3: What are the fairness perceptions of paper and video resumes among recruiters?

Selection is a two-way process, involving interaction between the applicant and the hiring organization. But contrary to the literature on applicant perceptions, little research has been done on recruiter perceptions. The study described in Chapter 5 assessed actual recruiters' (n = 166) fairness perceptions in video and paper resume screening. Results showed that recruiters perceived paper resumes as more fair and as having more predictive validity than video resumes. This is in line with the fairness concerns that have been voiced by lawyers and practitioners about video resumes (Lefkow, 2007). Also, in general and contrary to job applicants, recruiters tend to prefer objectivity and standardization of selection procedures to participation and tailor-made approaches (Derous, 2007). Paper resumes generally contain more detailed, formal information about objective characteristics (e.g., duration of employment, grades) which may be used as an indicator of job suitability, when compared to statements usually given in video resumes. This may explain the higher perceived predictive validity of paper resumes compared to video resumes by recruiters. Another reason for the lower fairness perceptions among recruiters of video resumes compared to paper resumes may simply be the lack of familiarity of recruiters with video resumes (Brockner, Ackerman, & Fairchild, 2001).

In sum, the research questions on applicant and recruiter fairness perceptions (1,2, 3) may be answered negatively for video resumes compared to paper resumes: Actual applicants and recruiters perceived video resumes as less fair than paper resumes. But applicant characteristics need to be taken into account. Applicants with a weaker labor market position were relatively positive about video resumes compared to paper resumes in terms of fairness and justice, namely ethnic minority job seekers, those with limited host country language proficiency skills, and lower educated applicants/those with lower cognitive abilities. Furthermore, extraverted applicants perceived more opportunity to perform in video resumes and considered them to be more overall fair compared to introverted applicants. So far, it can be concluded that applicant video resume perceptions are indeed influenced by individual differences, namely ethnic identity, language proficiency, extraversion, emotional stability and cognitive ability. But the influence of these individual differences may differ per selection instrument (e.g., personality and cognitive ability were not related to paper resume perceptions).

Perceptions of fairness may differ from measured discriminatory effects in terms of differential selection outcomes for ethnic minority and majority applicants (Anderson, 2011). In addition to perceived fairness, research questions 4 and 5 focused on factors that are related to differential selection outcomes for ethnic minority and majority applicants.

Research Question 4: Can differential job access partly be explained by the way ethnic minorities and majorities present themselves in their paper resume?

Underlying factors leading to relatively more majority group members getting hired compared to minority group members may be related to subgroup differences in (reported) job qualifications (Research question 4) or biased selection methods (Research question 5). To answer Research question 4, a comparison was made between 100 existing non-Western ethnic minority graduate resumes and 100 existing native Western ethnic majority graduate resumes (Chapter 2). This comparison was made by 40 actual recruiters. To minimize possible biases in the ratings by the recruiter participants, all

resumes were made anonymous by masking the personal data information that is usually presented at the top of the resume (e.g., name, address, gender, age, e-mail address).

The results showed that non-Western ethnic minority applicants scored significantly lower on reported organizational internships, leadership experiences, and extracurricular activities than Western ethnic majority applicants. Although most ethnicity effects were small, these differences in resume content resulted in lower job suitability ratings for non-Western ethnic minorities compared to Western ethnic majorities, as judged by professional recruiters. Resume presentation (e.g., layout and grammar) also was a significant predictor of job suitability ratings, but no ethnicity effects were found in these presentation characteristics. Because rater effects which may be related to hiring discrimination were controlled for, such as implicit and explicit prejudice, it can be concluded that the reported human capital in resumes can partly explain differential job access of ethnic minority compared to ethnic majority graduates.

Research Question 5: Are there differential discriminatory effects against ethnic minorities in paper versus video resume screening?

This research question was studied in Chapter 5 in a field experiment among recruiters from a diversity of organizations across the Netherlands (n = 166) in which applicants' name (Dutch-sounding vs. Moroccan-sounding name), accent (standard Dutch accent vs. Arab-Dutch accent) and resume format (paper vs. video resume) were manipulated. Two competing hypotheses were suggested, namely the individuation hypothesis (which expected less judgmental bias against minorities in video resume screening than in paper resumes screening) versus the categorization hypothesis (which expected more judgmental bias against minorities in video resume screening than in paper resumes screening). No significant differences in job suitability ratings were found, however, for ethnic minority and majority applicants across application formats (paper versus video resume). Despite recruiters' discriminatory concerns (as measured in Research question 3), ethnic minority video resume applications did not automatically lead to more negative impressions of job applicants. Interestingly, the results in Chapter 5 also showed that recruiter characteristics need to be taken into account when examining the threats and benefits of video resumes, because job suitability scores were moderated by recruiter prejudice. Low prejudiced recruiters rewarded increased ethnic identity (name, accent) with higher job suitability ratings, whereas the opposite was found for high prejudiced recruiters. Interestingly, prejudiced individuals were more likely to perceive minority applicants' accent as foreign and as less understandable, which in turn was related to lower job suitability ratings.

In sum, in addition to perceived fairness (Research questions 1, 2, and 3), the results on measured discriminatory effects in paper and video resume screening showed that reported job qualifications in paper resumes can indeed partly explain differential job access between ethnic minority and majority applicants (Research question 4). Furthermore, we did not find direct evidence (i.e., a main effect) for differential discriminatory effects in resume screening (Research question 5), but prejudice was a moderator that needs to be taken into account when studying sources of bias in paper and video resumes screening.

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Table 1
Overview of the Research Questions, Studies and Main Findings

Research Question	Chapter	Study type	Main findings
1. Applicant perceptions of paper and video resumes	3, 4	Survey among unemployed job seekers who created a video resume as part of a training (n = 445) and among actual applicants who applied with a paper and a video resume (n = 104).	Ethnic minority job seekers (lower educated), had equally or more positive perceptions of video resumes compared to paper resumes, and compared to ethnic majority job seekers. But applicants (higher educated) in an actual selection procedure strongly preferred paper resumes over video resumes in terms of fairness and job relatedness.
2a. Influence of ethnic minorities' identity and language proficiency on applicant perceptions	3	Survey among unemployed job seekers who created a video resume (n=445).	Ethnic minorities' identity strength was positively related to fairness perceptions of both paper and video resumes. Higher (Dutch) language proficiency was related to higher fairness perceptions of paper resumes compared to video resumes (moderator).
2b. Influence of personality and cognitive ability on applicant perceptions	4	Survey among actual applicants (n = 104) who applied with a paper and video resume and who were selected (n = 45).	Extraversion was positively related to perceived opportunity to perform in video resumes. Extraversion (+), Emotional Stability (+) and Cognitive ability (-) predicted video resume fairness perceptions. No significant results were found for individual differences and paper resumes.
3. Recruiter perceptions of paper and video resumes	5	Survey among actual recruiters (n = 166).	Recruiters perceived paper resumes as more fair and more predictively valid than video resumes.
4. Differences in reported human capital in ethnic majority and minority resumes	2	Field study among HR-professionals (n = 40) who rated anonymous resumes of 100 Western ethnic majority and 100 non-Western ethnic minority graduates.	Ethnic minority graduates reported less organizational internship, less leadership positions and less extracurricular activities than ethnic majority graduates. This resulted in lower job suitability ratings for ethnic minorities compared to majorities.
5. Discriminatory effects in paper and video resume screening	5	Field experiment using a between subjects factorial design, among actual recruiters (n = 166).	No direct evidence was found for differential discriminatory effects against Moroccan-Dutch applicants in paper and video resume screening. But recruiter prejudice moderated job suitability ratings: Low prejudiced recruiters rewarded increased ethnic identity (name, accent) with higher job suitability ratings; the opposite was found for high prejudiced recruiters. Prejudiced recruiters were more likely to perceive minority applicants' accent as foreign and as less understandable.

Strengths, Limitations and Practical Implications

Research has shown that paper resumes are perceived fairly equal by applicants across countries, namely in a favorable way (see for a meta-analysis: Anderson, Salgado, & Hulsheger, 2010). Not much is known, however, on video resume preferences and applicant preferences of underrepresented ethnic minority groups on the labor market. The studies in this dissertation provide theoretical as well as practical contributions for researchers, practitioners and policy makers.

As a *first contribution*, the studies in this dissertation add to the literature on applicant perceptions of new selection technologies, and of video resumes in particular. Studies in this area are still scarce and research is struggling to keep pace with developments in the field. The ecological validity of the studies in this dissertation was high because studies were conducted among experienced recruiters and, if possible, among actual job seekers. Furthermore, this dissertation is among the first to investigate video resumes from the recruiters' perspective, thereby adding to the scarce literature on recruiter perceptions of selection devices.

Taking ethnic group differences into consideration is the *second contribution* of this study. Understanding video resume preferences, particularly of underrepresented groups such as ethnic minorities, is very important because of experienced discrimination as well as to contribute to an on-going societal debate in the Netherlands and other Western countries on the merits of applying anonymously (e.g., Aslund & Skans, 2012). The video resume can be regarded as the opposite of applying anonymously: more (non-relevant) characteristics are available through visual and auditory cues. Furthermore, knowledge on the perceptions of ethnic minority applicants is important because potential legal and discriminatory concerns have been raised with the use of video resumes (Lefkow, 2007). Interestingly, and despite these concerns, ethnic minority applicants perceived the fairness of video resumes equally or more positively when compared to ethnic majority applicants, and when compared to paper resumes.

As a *third contribution* to the literature we explored possible moderators of ethnic minority applicant perceptions, namely ethnic identity and perceived language proficiency. Post hoc analyses showed that ethnic minorities who identified more strongly with their ethnic group showed more positive applicant perceptions of both video and paper resumes. Furthermore, language proficiency moderated the fairness perceptions of resumes: Those with better Dutch language skills preferred paper resumes in terms of fairness. Interestingly, and as a *fourth contribution* to the literature, significant individual differences (i.e., personality and cognitive ability) between applicants' preferences of video resumes were found in the relatively small sample described in Chapter 4. Therefore, the present dissertation extends the applicant perceptions literature by examining two key individual differences, namely cognitive ability and personality, to understand whether or not applicants differ in their perceptions of paper and video resumes. An improved understanding of individual differences in selection procedures is needed to inform practitioners on how to screen for a competitive workforce in a labor market that is rapidly changing due to technological and demographic developments.

Applicant perceptions of fairness and justice may differ from actual differential effects as measured in selection outcomes. A *fifth contribution* of this dissertation is that it can be concluded that the

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reported human capital in paper resumes can partly explain differential job access of ethnic minority compared to ethnic majority graduates. Career counselors could focus on empowerment and presentation skills of job seekers who want to apply at Western employers, to increase the chance of favorable employability ratings upon resume screening. Additionally, counselors could raise awareness among students, and ethnic minority students in particular, to participate in activities that help improve their professional qualifications. The results on reported human capital in resumes do not suggest that hiring discrimination does not play a role in resume screening. It may be that forms of hiring discrimination occur well before graduation. The results in Chapter 2 showed that ethnic minorities reported significantly less organizational internships, which may be explained by hiring discrimination at this early career stage (Dolfing & Van Tubergen, 2005). Indeed, the effect size of the implicit prejudice of our recruiter participants' sample, as measured by the implicit association test (IAT) in Chapter 2, was large. Moreover, recruiters' explicit prejudice proved to moderate the job suitability ratings in Chapter 5. In real life selection procedures, ethnic cues, such as name and place of birth of the applicant are usually present which may trigger (implicit) prejudice which can lead to hiring discrimination. This dissertation aimed to provide new insights into judgmental biases (and, hence, potential adverse impact) in paper and video resume screening. Furthering our understanding of impression formation and judgmental biases is highly important and relevant to organizations, for both economic and ethical reasons, such as equal job opportunities for ethnic minority and majority applicants.

When interpreting the study results as described in this dissertation, some limitations need to be taken into account. First, the studies presented here were all studied in the Dutch context. The generalizability of our findings needs to be assessed in different cultural and economic contexts as well. Future studies could consider cultural differences in the way recruiters screen resumes in addition to cultural differences in the way applicants present themselves in their resumes (see also the future research paragraph). Second, the nature of the applicant pools and procedures for video resume creation varied considerably between samples, making it more difficult to explain any differences in study results. Third, several confounding factors can be identified that may have influenced the study results presented in Chapter 5, in which no main effect was found for hiring discrimination in paper and video resume screening (Research question 5).

The past few years, several audit studies were conducted among real recruiters in the Netherlands (e.g., Backer, 2011; Derous et al., 2012) and these received ample media attention. It might be that the participating recruiters were sensitized for (research on) ethnic biases in resume-screening, which in turn might have influenced any explicit prejudice effect. This heightened awareness through professional and media attention on hiring discrimination might also explain why recruiters' explicit prejudice scores were moderate. Even more so because implicit ethnic prejudice was found to be high in Chapter 2 and, although debated, this implicit type of measurement is generally considered to be less susceptible to social desirable answering. Furthermore, restriction of range in prejudiced attitudes might have occurred. It may be that the influence of explicit prejudice (in both directions) on impression formation may actually be larger in real-life situations, than in this controlled research design despite the precautionary measures that were taken to mask the study goals. Thus, although the absence of measured hiring discrimination in Chapter 5 can be considered a positive finding,

the limitations as mentioned above need to be taken into account when interpreting the results on discriminatory effects in paper and video resume screening.

Fourth, the study in which the individuation versus categorization hypothesis was introduced (Research question 5), focused mainly on the outcome in terms of perceived job suitability of the applicant, and only explicit prejudice was used as a predictor. This has left questions on the psychological processes that may lead to categorization and/or individuation in paper versus video resume screening largely unanswered. Future research may address some of the issues presented above.

Future Research

Although the screening of resumes is an ubiquitous procedure in the first selection stage of many hiring organizations, it has received less research attention compared to other selection instruments. This accounts especially for video resume screening, which has hardly been researched at all. This dissertation is, as far as we know, among the first to study video resumes. Suggestions for future research can therefore be made that build on the studies presented here. In addition, new areas of research on video resume screening that were not addressed in this dissertation may also be identified. As regards the research questions on perceptions of fairness and justice, future research could build on the studies presented here to be able to disentangle the influence of the format (e.g., a highly structured, predefined format with content requirements vs. an unstructured format in which the content is determined by the applicant), the medium (paper vs. video), and individual differences (e.g., educational level, ethnicity, personality) on applicant and recruiter perceptions. Several suggestions for future research can be also made regarding the research questions on factors related to differential selection outcomes for ethnic minority and majority applicants.

First, future research may focus on self-presentation and impression management tactics in paper resumes, as well as in video resumes, which has hardly been researched until now (see for an exception on self-presentation in video resumes: Waung, Hymes, Beatty, & McAuslan, 2012). Culturally diverse applicants may present themselves differently, depending on their cultural background. Research has shown that Western organizations typically have cultures that emphasize individual achievement, competition and rationality (Stone & Stone-Romero, 2004, Syed, 2008). Consequently, job suitability is considered higher for individualistic and achievement oriented applicants in this cultural setting (Syed, 2008). Non-western ethnic minority applicants, particularly those from collectivist societies, who represent themselves in their resumes may be disadvantaged by this. Cultural differences have also been found on individuals´ beliefs about their socially desirable traits (self-enhancement; Heine & Hamamura, 2007). For instance, research has shown that North American/Western individuals self-enhance more than other non-Western individuals (Heine & Hamamura, 2007). A genuine belief that one has socially desirable traits will make one's self-advertisement more attractive and effective towards the desired other party (e.g., employers; Falk, Heine, Yuki, and Takemura (2009). These cultural differences in self-enhancement may be related to differences in self-presentation in the resumes of ethnic minority and majority applicants.

Second, the individuation versus categorization hypothesis may be researched to a further extent. As mentioned in the limitations section, the study in which these competing hypotheses were introduced was a field experiment that focused mainly on the job suitability ratings, thereby leaving questions on the psychological processes that may lead to stereotype activation and categorization in paper versus video resume screening largely unanswered. Future research aiming to test the competing hypotheses (individuation vs. categorization) may be conducted in a lab-context. This allows for a more controlled research setting, compared to a field experiment, in which the psychological process of stereotype activation and categorization in paper vis-à-vis video resume screening can be researched. In a lab-study, recent insights from social neuroscience on implicit prejudice (Amodio & Ratner, 2011) may be used to further our understanding on the impression formation processes in resume screening, e.g., through electrophysiological indices of cognitive processes and self-regulation of behavior (Amodio, 2011). In addition to research on ethnic prejudice as a source of judgmental bias, future research may also focus on impression formation and biases due to auditory factors in personnel selection. This has remained relatively under researched until now (Gluszek & Dovidio, 2010). Among these auditory factors are recruiters' language attitudes and their relation with perceived accent understandability. These attitudes turned out to be related to job suitability ratings in Chapter 5. Future research may also focus on contextual conditions under which it is beneficial to apply with a video resume and/or a paper resume. For example, differences in impression formation may occur for types of occupations for which different job qualifications are required (e.g., a marketing versus an administrative position), or for different job types (e.g., a back office versus front office position)

Lastly, to fully consider the threats and benefits of paper and video resume screening, other topics that were beyond the scope of this dissertation need to be taken into account as well. These topics include research on the benefits and disadvantages of paper and video resumes for a broader array of subgroups (e.g., older workers), the validity, inter-rater reliability, cost-effectiveness, and ease of use of paper and video resumes (Cook, 2009). For instance, the role of applicants' physical age (young vs. older) and physical attractiveness (attractive vs. unattractive) in paper versus resumes screening was studied by Derous, Taveirne, and Hiemstra (2012). These findings showed that video and paper resumes may lead to equal job suitability ratings. However, it was also shown that resume-screening outcomes might depend on job-irrelevant applicant characteristics (such as age and physical unattractiveness) as well as its interaction with resume-type. That is, in the study by Derous et al. (2012), the unattractive applicants were more disadvantaged whereas the older applicants were more advantaged when they applied through video resumes compared to paper resumes. As regards the cost effectiveness and ease of use, some practitioners mention that it may be more time-consuming to screen video resumes compared to paper resumes. No automated coding software is available, as is the case for paper resumes, thus further research is needed on this issue. On the other hand, if video resume screening ensures more effective selection in the first round (i.e., improved predictive validity), it may be more cost-effective in terms of reduced interview time.

Moreover, with the emergence of video resumes and other internet-based technologies, issues arise on privacy and measurement equivalence (compared to paper resumes). As regards privacy, an infamous example is the video resume application of a Yale-student who applied with a video resume entitled 'Impossible is nothing' (De la Merced, 2006). The content clearly did not match the corporate standards of the hiring organization. An employee forwarded the application to other recruiters, who put it on the internet. The clip became an internet meme and was parodied, for example, by comedian Michael Cera (Cera, 2006). Thus lack of privacy in video resume applications may have negative consequences for the applicant, also for his or her future applications. Future research may focus on privacy issues in video resume screening, and more broadly on the use of social media in selection (e.g., Landers & Goldberg, in press).

Future research may also focus on measurement equivalence compared to other commonly used selection instruments. As regards measurement equivalence, video resumes may be too narrow a term, because the instrument does not necessarily imply a literal translation of the paper version to a video version, as is the case with some computerized tests. Characteristics of the interview, work sample test, and letters of motivation are also identifiable in the video resume. In this dissertation the comparison was made with paper resumes, because of its use in the earliest screening phase (i.e., the more expensive and time-intensive interviews and work sample tests are usually introduced after the first selection round of resume-screening), and because limited applicant information is available in this early screening phase (i.e., resumes are used for the initial contact with organizations, whereas selected resumes are often used as an input for subsequent job interviews). But because video resumes also include visual and auditory information (like the interview and work sample test), as well as motivational statements (like the letter of motivation), it can be argued that they are not equivalent to paper resumes and should also be studied for measurement equivalence with other commonly used selection instruments.

Conclusion

Resumes are widely used in personnel screening and video resumes have gained in popularity. Much is still to be known about the potential benefits and disadvantages of video resumes in personnel selection. To the best of our knowledge, this dissertation is among the first to study video resumes. In doing so it aimed to shed light on existing differential job access between ethnic minority and majority job applicants, as well as to add to our understanding of the use of video resumes as a technological innovation in personnel selection.

Interestingly and despite discriminatory concerns, ethnic minority applicants perceived the fairness of video resumes equally or more positively when compared to ethnic majority applicants and recruiters, and when compared to paper resumes. These perceptions were influenced by minorities' ethnic identity and language proficiency. Ethnic identity was positively related to fairness perceptions of resumes. Furthermore, higher (Dutch) language proficiency was related to higher fairness perceptions of paper resumes. Additionally, other individual factors such as personality (extraversion, emotional stability) and cognitive ability influenced applicant fairness perceptions: Extraverted applicants perceived video resumes as more fair than introverted applicants. Higher educated applicants and

those with higher cognitive abilities, on the other hand, considered paper resumes to be more fair. The implication is suggested that applicants with a weaker labor market position, such as ethnic minorities or those with limited language skills or lack of formal credentials, may prefer a more personalized way of applying (video resume), instead of less personalized ways.

Applicant perceptions of fairness and justice may differ from actual discriminatory effects as measured in selection outcomes. It can be concluded that the reported human capital in paper resumes can partly explain differential job access of ethnic minority compared to ethnic majority graduates. Ethnic minority applicants reported significantly less organizational internships, leadership positions and extracurricular activities which in turn impacted negatively on their perceived job suitability. The results on reported human capital in resumes do not suggest, however, that hiring discrimination does not play a role in resume screening. It was namely shown that recruiter characteristics, such as prejudice, can influence impression formation in resume screening and therefore need to be taken into account when examining the threats and benefits of video resumes.

Video resumes have benefits and disadvantages, like all selection instruments, so choice of an instrument for assessment is always a compromise (cf. Cook, 2009). Video resumes may be used for selection when it is considered desirable to provide a more personalized opportunity to apply, thereby appealing more to applicants with a weaker labor market position, as well as to more extraverted applicants. Furthermore, no direct evidence was found that video resume applications lead to more hiring discrimination compared to paper resumes, despite discriminatory concerns. At the same time caution is warranted when considering the use of video resumes because results showed that recruiters and highly educated applicants perceived paper resumes as more fair and more job related than video resumes. Additionally, much is still unknown on actual discriminatory effects in video vis-à-vis paper resume screening. Further understanding of video resumes and fairness is therefore important because the workplace in Western countries is rapidly becoming more multicultural and differential job access persists. Selection starts at organizational entry and this often encompasses resume screening. Given the growing use of multimedia instruments, such as video resumes, the use of these instruments for selection needs to be scrutinized, in research and in the field, to ensure fair and accurate person evaluation procedures.

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Nederlandse Samenvatting

Curricula vitae's (cv's) worden wereldwijd het meest gebruikt voor het screenen van sollicitanten. Bovendien is het cv een van de best geaccepteerde screenings-instrumenten onder zowel recruiters als sollicitanten (Anderson, Salgado, & Hulsheger, 2010; Piotrowsky & Armstrong, 2006). Hoewel er wel culturele verschillen zijn gerapporteerd ten aanzien van selectieprocedures (bijvoorbeeld door Huo, Huang, & Napier, 2002; Ryan, McFarland, Baron, & Page, 1999), volgen selectieprocedures in veel landen een min of meer gelijkaardig patroon (Cook, 2009). Veelal wordt gestart met het cv als een vorm van screening. Recente technologische ontwikkelingen hebben geleid tot de introductie van een nieuw type cv, het video cv. Dit type cv kan omschreven worden als een video-opname waarin een sollicitant zich presenteert aan mogelijke werkgevers (Hiemstra, Derous, Serlie, & Born, 2012; Waung, Hymes, Beatty, & McAuslan, 2012). Het video cv wordt ook wel aangeduid als video sollicitatie. De vorm en de inhoud van video cv's kunnen sterk verschillen, maar de belangrijkste overeenkomst tussen alle typen video cv's is dat visuele en auditieve informatie over de sollicitant wordt geïntroduceerd in de allereerste fase van het sollicitatieproces.

Het gebruik van video cv's in plaats van of naast het traditionele (papieren) cv kan verschillende voordelen bieden. Het kan sollicitanten bijvoorbeeld de gelegenheid geven om hun talenten meer te tonen dan in een papieren cv, vanwege de additionele visuele en auditieve informatie. Ook kan het zo zijn dat sollicitanten het makkelijker en meer *up-to-date* vinden om multimedia te gebruiken bij het solliciteren, vergeleken met het solliciteren via alleen tekst , zoals via het papieren cv of via sollicitatieformulieren. Tegelijkertijd zijn er zorgen geuit door wetenschappers, HR-professionals en juristen ten aanzien van een beoordelings*bias* met betrekking tot subgroepen op basis van hun etniciteit, geslacht, en leeftijd tijdens het beoordelen van cv's (Derous, Ryan, & Nguyen, 2012; Outtz, 2009). En recentelijk zijn deze zorgen in het bijzonder geuit bij het gebruik van video CV's (Lefkow, 2007).

Er is echter nog weinig bekend over de daadwerkelijke voor- en nadelen van het gebruik van video cv's in sollicitatieprocedures. Ook voor het video cv geldt dat onderzoek achterloopt bij de snelheid waarmee internet-gebaseerde technologieën worden geïmplementeerd door selecterende organisaties en sollicitanten (Lievens & Harris, 2003). Bij de introductie van nieuwe technologie in *high-stakes* selectie-procedures is het onder andere van belang om naast validiteit en betrouwbaarheid de volgende twee aspecten te onderzoeken: De acceptatie door sollicitanten (bijvoorbeeld hoe eerlijk zij een bepaalde procedure vinden) en mogelijke (onbedoelde) discriminatoire effecten (bijvoorbeeld de vraag of er onevenredig grote verschillen in selectie-ratio's aanwezig zijn tussen verschillende subgroepen; Cook, 2009).

Onderzoek naar acceptatie en percepties van discriminatie en daadwerkelijke discriminatie is specifiek van belang voor het verklaren van de achterstandspositie van subgroepen op de arbeidsmarkt, zoals etnische minderheden. In westerse landen, Nederland is daarop geen uitzondering, doen etnische minderheden er langer over om een baan te vinden dan autochtonen. Bovendien liggen de werkloosheidspercentages bij etnische minderheidsgroepen structureel hoger (Forum, 2012). Deze verschillen in arbeidsmogelijkheden zijn verklaard op basis van daadwerkelijke verschillen in baanrelevante kwalificaties, en op basis van discriminatie. Veel selectie instrumenten zijn nauwkeurig

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onderzocht op mogelijke discriminatie in termen van onevenredig negatieve selectieresultaten voor etnische minderheden (Outtz, 2009), zoals capaciteitentesten. Maar het cv is veel minder vaak onderzocht, en met name het video cv is nog nauwelijks wetenschappelijk onderzocht.

In dit proefschrift zijn zowel de acceptatie door sollicitanten en recruiters als mogelijke discriminatoire effecten onderzocht bij selectie op basis van papieren en video cv's. Het bevat daarmee een van de eerste serie studies naar het gebruik van video cv's in selectie. Met dit onderzoek is beoogd meer inzicht te krijgen in het bestaande verschil in selectie-uitkomsten voor etnische groepen op de arbeidsmarkt. Ook is beoogd om meer inzicht te verschaffen in het gebruik van video cv's als een technologische innovatie in personeelsselectie. Hieronder worden de voornaamste bevindingen beschreven uit dit proefschrift.

Overzicht van Empirische Bevindingen

De empirische studies in dit proefschrift hebben zich gericht op percepties van sollicitanten en recruiters over de eerlijkheid van papieren en video cv's (hoofdstuk 3,4, en 5) en op mogelijke verschillen in uitkomsten tussen verschillende etnische groepen (hoofdstuk 2 en 5) bij het selecteren op basis van papieren en video cv's. De uitkomsten worden hieronder beschreven. Eerst komen de bevindingen aan bod over percepties van eerlijkheid van papieren en video cv's onder sollicitanten en recruiters, waarna de bevindingen worden behandeld met betrekking tot verschillen tussen etnische groepen in daadwerkelijke selectie-uitkomsten gebaseerd op papieren en video cv's.

Percepties van Eerlijkheid bij Etnisch Diverse Sollicitanten

Als hoe eerlijk worden papieren en video cv's waargenomen door sollicitanten? Deze vraag vormde de aanleiding van twee empirische studies die zijn beschreven in hoofdstuk 3 en 4. De eerste studie (**hoofdstuk 3**) bestudeerde de percepties van cultureel diverse werkzoekenden ($n =$ 445) ten aanzien van eerlijkheid van papieren en video cv's. Participanten aan het onderzoek waren werklozen die deelname aan een gesubsidieerde sollicitatietraining. Deze training resulteerde voor elke werkzoekende in een eigen video cv. De resultaten lieten zien dat video cv's als eerlijker werden ervaren vergeleken met papieren cv's. Deze bevinding kwam overeen met eerdere onderzoeken waarin multimedia test positiever werden beoordeeld dan pen-en-papier-test (bijvoorbeeld Potosky & Bobko, 2004). De resultaten voor percepties van procedurele rechtvaardigheid (de indruksvaliditeit, de subjectief ingeschatte predictieve validiteit en de mogelijkheid om te presteren) vertoonden juist een tegenovergesteld patroon: De waargenomen rechtvaardigheid van papieren cv's was positiever dan van video cv's. Deze resultaten lijken tegenstrijdig (namelijk enerzijds de bevinding van hogere percepties van eerlijkheid en anderzijds de gevonden lagere waargenomen procedurele rechtvaardigheid van video cv's dan papieren cv's), maar verschillen tussen etnische groepen kunnen deze paradox verklaren. Etnische minderheden beoordeelden de predictieve validiteit, de indruksvaliditeit en de mogelijkheid om te presteren voor video cv's als gelijk aan of beter dan de Nederlandse etnische meerderheid. Dit gold met name voor Turkse en Marokkaanse deelnemers. Met andere woorden, ondanks zorgen over mogelijke discriminatie, kan geconcludeerd worden dat

allochtone sollicitanten de eerlijkheid van video cv's als gelijk aan of beter lijken te ervaren vergeleken met autochtone sollicitanten, en vergeleken met papieren cv's. Dit leidt mogelijk tot de implicatie dat allochtonen een meer persoonlijke manier van solliciteren prefereren (bijvoorbeeld het video cv), boven een minder persoonlijke manieren, zoals de ' papieren persoon' in het traditionele cv.

De perceptie over de eerlijkheid van papieren en video cv's vormde ook het uitgangspunt van de studie die in **hoofdstuk 4** is beschreven. Ditmaal ging het om sollicitanten (n = 104) voor een juridisch traineeship. Als onderdeel van de betreffende selectieprocedure informeerden de sollicitanten de werkgever over hun vaardigheden en motivaties middels een video cv. Dit werd gedaan als toevoeging op het insturen van een papieren cv. De sollicitanten hadden een Master diploma in de rechtsgeleerdheid en beperkte werkervaring (gemiddeld 2 jaar). Allen solliciteerden voor dezelfde starters positie.

In tegenstelling tot de eerder beschreven bevindingen onder etnisch diverse werkzoekenden, bleek dat de sollicitanten voor het juridische traineeship in sterke mate het papieren cv prefereerden boven het video cv. Dat gold voor eerlijkheid en procedurele rechtvaardigheid. Hoewel video cv's in toenemende mate worden gebruikt, toonde deze studie aan dat niet alle sollicitanten het video cv als een positieve trend ervaren. Brockner, Ackerman, en Fairchild (2001) betoogden dat hoe meer bekend een sollicitant is met een selectieprocedure, des te legitiemer de procedure zal lijken. Omdat papieren cv's nog steeds het meest gebruikte selectie-instrument zijn, vooral onder hoog opgeleiden referentie, kan dit een mogelijke verklaring zijn voor de bevindingen in de studie onder de sollicitanten voor het juridische traineeship.. Een andere mogelijke verklaring voor de tegengestelde bevindingen in de huidige studie en de studie onder werkzoekenden kan liggen in het verschil in format dat werd gebruikt voor het video cv in beide studies.

Invloed van etnische identiteit en taalvaardigheid. Bij het bestuderen van verschillen tussen etnische groepen is het belangrijk om te beseffen dat etniciteit verschillende betekenissen kan hebben voor personen die in sociaal-demografisch opzicht tot dezelfde etnische groep worden gerekend. Om die reden werd in de uitgevoerde studies naast een sociaal-demografische benadering van etniciteit, ook een psychologische benadering gekozen (**hoofdstuk 3**). Hiertoe werden de etnische identiteit en de taalvaardigheid zoals door sollicitanten zelf beoordeeld nagegaan bij sollicitanten uit minderheidsgroepen. De etnische identiteit van minderheden bleek positief gerelateerd te zijn aan percepties van eerlijkheid van zowel papieren als video cv's. Met andere woorden, minderheden die zich sterker identificeerden met hun eigen etnische groep hadden ook positievere percepties van het papieren en het video cv. Het zou zo kunnen zijn dat etnische identiteit in het algemeen samenhangt met een meer positieve perceptie van selectie-instrumenten, wellicht omdat etnische identiteit gerelateerd is aan welbevinden in het algemeen (Smith & Silva, 2011). Deze bevinding is interessant, omdat in de personeelspsychologische literatuur over het algemeen wordt aangenomen, dat een sterker etnische identiteit juist gerelateerd is aan percepties van discriminatie en intenties om juridische stappen te ondernemen tegen een werkgever (e.g., Anderson, 2011; Operario & Fiske, 2001). Onze resultaten tonen echter aan dat een sterkere etnische identiteit gerelateerd is aan meer positieve percepties van eerlijkheid van selectie-instrumenten.

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De ervaren vaardigheid in de Nederlandse taal bleek een significante moderator te zijn: Een grotere taalvaardigheid was gerelateerd aan hogere percepties van eerlijkheid van papieren cv's ten opzichte van het video cv. We kunnen hieruit afleiden dat het voor sommige sollicitanten gunstiger kan zijn dan voor anderen om met een video cv te solliciteren. Het kan bijvoorbeeld gunstiger zijn voor sollicitanten met een zwakkere arbeidsmarktpositie in het geval dat zij een gebrekkiger (Nederlandse) taalvaardigheid zouden hebben.

Invloed van persoonlijkheid en cognitieve capaciteiten. Percepties van eerlijkheid kunnen beïnvloed worden door stabiele kenmerken, zoals persoonlijkheid en intelligentie. De invloed van deze individuele verschillen is echter nog nauwelijks onderzocht, en dus ook niet voor het video cv. De invloed van persoonlijkheid en intelligentie werd besproken in het tweede deel van **hoofdstuk 4**. Van de 104 participanten die solliciteerden voor een juridisch traineeship, werden er 45 geselecteerd voor de twee ronde in de selectieprocedure voor een juridisch traineeship. Alle sollicitanten hadden gesolliciteerd met een papieren en video cv in de eerste ronde. De tweede selectieronde bevatte een persoonlijkheidsvragenlijst en een cognitieve capaciteitentest.

Ten aanzien van de percepties van papieren cv's werden geen significante verbanden gevonden met persoonlijkheid en cognitieve capaciteiten. De resultaten voor video cv's toonden daarentegen aan dat extraverte sollicitanten meer mogelijkheden zagen om zich te presteren in het video cv vergeleken met introvertere sollicitanten. Extraversie was bovendien een positieve voorspeller van eerlijkheidspercepties van het video cv, terwijl Emotionele Stabiliteit negatief samenhing met eerlijkheidspercepties van dit cv. Mogelijk doordat video cv's appelleren aan presentatie- en interpersoonlijke vaardigheden kan extraversie eerlijkheidspercepties van het video cv beïnvloeden in *high-stake* selectieprocedures.

Recruiters dienen zich te realiseren dat extraverte sollicitanten wellicht een grotere voorkeur voor video cv's hebben dan introverte sollicitanten. Dit verschil in voorkeur kan gevolgen hebben voor de pool van sollicitanten die reageert op een vacature en daarmee mogelijk ook op de selectiebeslissingen. Er kan bijvoorbeeld een zelfselectie effect optreden, waarbij meer introverte sollicitanten er vanaf zien om op een vacature te reageren als een video cv een verplicht onderdeel van de procedure vormt. Ook zouden extravertere sollicitanten meer voordeel kunnen hebben van een video cv sollicitatie dan introverte sollicitanten, bijvoorbeeld omdat zij zich meer dan introverte sollicitanten op hun gemak voelen als ze zichzelf presenteren voor een camera.

Cognitieve capaciteiten bleken negatief gerelateerd te zijn aan de waargenomen eerlijkheid van het video cv. Met andere woorden, sollicitanten die hoog scoorden op de cognitieve capaciteitentest oordeelden negatiever over het video cv vergeleken met sollicitanten die relatief laag scoorden op de capaciteitentest. Dit was een opvallend resultaat vanwege de vrij homogene groep participanten die waren onderzocht en die op een na allemaal een Master diploma hadden. De resultaten zijn echter wel in lijn met de resultaten uit de studie (hoofdstuk 3) onder werkzoekenden. Als opleidingsniveau zoals bevraagd in de studie onder de werkloze sollicitanten (hoofdstuk 3) zou worden opgevat als een afgeleide van iemands cognitieve capaciteiten, dan volgen de resultaten onder de werklozen een vergelijkbaar patroon als onder de traineeship sollicitanten: Hoger opgeleide werkloze participanten

ervaren het video cv als minder eerlijk dan laagopgeleide werkloze participanten. Bovendien beoordeelden de hoger opgeleide werkloze participanten de indruksvaliditeit van papieren cv's als hoger dan lager opgeleide werkloze participanten.

Zijn Video cv's Eerlijk Volgens Recruiters?

Selectie is een interactieproces tussen twee partijen, de sollicitant en de organisatie. In tegenstelling tot de literatuur naar percepties van sollicitanten, is er echter weinig onderzoek gedaan naar de percepties van recruiters, die bij de selectie betrokken zijn namens de organisatie. In de studie die beschreven is in **hoofdstuk 5** werden recruiters (n = 166) gevraagd naar hun percepties van de eerlijkheid van het screenen op basis van video cv's. Ter vergelijking werd ook gevraagd naar hun percepties van het papieren cv. De verkregen resultaten toonden aan dat recruiters het papieren cv een eerlijker selectiemethode vonden dan het video cv. Bovendien vonden zij dat het papieren cv werkprestaties beter voorspelt dan het video cv. Deze bevinding komt overeen met de zorgen die zijn geuit in de media door juristen en HR-professionals over het video cv (Lefkow, 2007). Daarnaast is bekend dat in het algemeen, en in tegenstelling tot sollicitanten, recruiters vaker een voorkeur hebben voor een objectieve en gestandaardiseerde selectiemethode in plaats van op maat gemaakte manieren van selecteren (Derous, 2007). Papieren cv's bevatten over het algemeen meer gedetailleerde informatie over objectieve kenmerken (bijvoorbeeld de duur van arbeidsbetrekkingen, studiecijfers) die gebruikt kunnen worden om een indruk te krijgen van de geschiktheid van een sollicitant. Het video bevat vaker meer algemene uitspraken zoals over competenties. Dit verschil kan een verklaring zijn voor de hogere ervaren predictieve waarde van het papieren cv vergeleken met het video cv. Een andere reden voor de negatievere percepties over het video cv vergeleken met het papieren cv kan simpelweg liggen in het gebrek aan bekendheid van veel recruiters met dit type cv ('onbekend maakt onbemind'; Brockner et al., 2001).

Percepties over de eerlijkheid van een instrument kunnen verschillen van daadwerkelijk gemeten eerlijkheid, bijvoorbeeld in termen van onterecht negatieve effecten van het gebruik van het video cv op selectie-uitkomsten voor minderheden in vergelijking met de etnische meerderheid (Anderson, 2011). Daarom is naast gepercipieerde eerlijkheid ook nagegaan of er daadwerkelijke verschillen zijn in selectie-uitkomsten door het gebruik van het video cv.

Verschillen Tussen Etnische Groepen in Selectie-uitkomsten bij Gebruik van Video cv's

Etnische minderheden doen er gemiddeld langer over om een baan te vinden dan autochtonen. Ook werken zij vaker in functies onder hun opleidingsniveau (Vandevenne & Lenaers, 2007; Van Gent, Hello, Ode, Tromp, & Stouten, 2006). Factoren die hieraan ten grondslag kunnen liggen zijn te vinden in daadwerkelijke groepsverschillen ten aanzien van (gerapporteerde) baangerelateerde kwalificaties in het cv (*human capital*) en in het ten onrechte bevoor- of benadelen van sollicitanten op basis van hun groepskenmerken (*bias* in selectiemethoden). Beide factoren werden nagegaan in twee empirische studies (hoofdstuk 2 en 5). Eerder onderzoek heeft aangetoond dat discriminatie op basis van de naam die op het cv staat veelvuldig voorkomt (bijvoorbeeld Adam versus Abdul). Dit type onderzoek heeft

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altijd gebruikgemaakt van geconstrueerde cv's van fictieve sollicitanten, waarbij alle kwalificaties gelijk gehouden werden en alleen de naam op het cv werd veranderd. Het is echter mogelijk dat er daadwerkelijke verschillen zijn in de manier waarop sollicitanten met een divers etnische achtergrond zich presenteren in hun papieren cv. Mogelijk daadwerkelijke verschillen kunnen in een onderzoeksopzet met fictieve sollicitanten niet worden achterhaald. In hoofdstuk 2 werden dan ook mogelijke verschillen in cv-inhoud van bestaande cv's van sollicitanten uit de etnische meerderheid en de etnische minderheid nagegaan. Vervolgens werd in hoofdstuk 5 mogelijke bias onderzocht bij het beoordelen van video en papieren cv's.

In **hoofdstuk 2** stond de vraag centraal of bestaande verschillen in werksucces gedeeltelijk verklaard kunnen worden door de manier waarop sollicitanten uit etnische minderheids- en meerderheidsgroepen zich presenteren in hun papieren cv. Om deze vraag te beantwoorden werden 100 bestaande cv's van niet-westerse, pas afgestudeerde studenten en 100 bestaande cv's van autochtoon westerse (Nederlandse) pas afgestudeerde studenten met elkaar vergeleken. Deze vergelijking werd gemaakt door 40 ervaren recruiters. Om het risico te minimaliseren op bias in het beoordelen door de recruiters waren alle cv's geanonimiseerd. Anonimisering gebeurde door de persoonlijke gegevens, die doorgaans bovenaan het cv worden gepresenteerd, te maskeren (denk aan naam, adres, geslacht, leeftijd, e-mail adres). De resultaten uit deze studie toonden dat pas afgestudeerde niet-westerse etnische minderheden significant minder vaak vermelding maakten op hun cv van stages en dat zij minder leiderschapservaringen (bijvoorbeeld een leidinggevende positie in een bijbaan) en minder extra curriculaire activiteiten rapporteerden dan autochtone pas afgestudeerden. Hoewel de effecten klein waren, resulteerden deze verschillen toch in een gemiddeld significant lagere beoordeling door de recruiters van de baangeschiktheid van de niet-westerse sollicitanten dan de westerse sollicitanten. Presentatie kenmerken van het cv (bijvoorbeeld de lay-out en het gebruik van correcte grammatica) vormden ook een significante voorspeller van geschiktheidsbeoordelingen, maar op dit vlak werden geen verschillen gevonden op basis van etniciteit. Omdat in deze studie was gecontroleerd voor beoordelaarseffecten die kunnen leiden tot discriminatie, zoals impliciete en expliciete vooroordelen, kan geconcludeerd worden dat cv kenmerken inderdaad voor een deel kunnen verklaren waarom hoogopgeleide allochtonen er gemiddeld langer over doen om een baan op hun niveau te vinden dan autochtonen met een vergelijkbaar opleidingsniveau.

In het tweede deel van **hoofdstuk 5** werd onderzocht of er mogelijk meer discriminatie (bias) tegen etnische minderheden optreedt bij het screenen met het video cv dan met het papieren cv. Hiertoe werd een veldexperiment uitgevoerd onder recruiters (n = 166). De recruiters beoordeelden elk een cv. Tussen recruiters was de naam van de sollicitant (een Nederlands versus een Marokkaans klinkende naam), het accent (een standaard Nederlands accent versus een Arabisch-Nederlands accent), en het cv format (papieren versus video cv) afgewisseld.

In deze studie werden geen verschillen gevonden in geschiktheidsbeoordelingen van sollicitanten afkomstig uit de minderheidsgroep en van sollicitanten afkomstig uit de meerderheidsgroep (autochtoon). Deze bevinding gold voor zowel het papieren als het video cv. Dit resultaat geeft aan dat ondanks het feit dat recruiters video cv's minder eerlijk vinden (zoals beschreven in het eerste deel van

hoofdstuk 5), dit type cv's niet noodzakelijkerwijs leiden tot meer negatieve bias tegen sollicitanten. Een interessante uitkomst in hoofdstuk 5 was dat recruiter-kenmerken in ogenschouw moeten worden genomen bij het bepalen van de voor- en nadelen van het video cv als selectie instrument. De resultaten lieten namelijk zien dat de baangeschiktheidsbeoordelingen werden gemodereerd door de expliciete vooroordelen van de recruiter. Laag bevooroordeelde recruiters leken een verhoogde etnische identificatie (in termen van naam en accent) te 'belonen' met hogere geschiktheidsbeoordelingen van de sollicitant, terwijl het tegenovergestelde resultaat bleek voor hoog bevooroordeelde recruiters. Bovendien bleek dat hoog bevooroordeelde recruiters ook eerder geneigd waren om het accent van de Marokkaans-Nederlandse sollicitant als 'buitenlands' en als 'minder goed verstaanbaar' te beoordelen. De beoordeling van de verstaanbaarheid van het accent bleek op zijn beurt weer gerelateerd te zijn aan een lagere geschiktheidsbeoordeling van de sollicitant.

Conclusie

Het gebruik van video cv's als selectie-instrument neemt zichtbaar toe. Er is echter nog weinig onderzoek gedaan naar de psychometrische kenmerken van het video cv. De studies in dit proefschrift richtten zich op een van deze kenmerken, namelijk eerlijkheid ('fairness') van dit instrument voor selectie voor sollicitanten met een diverse etnische achtergrond. Door deze invalshoek te nemen beoogt dit proefschrift meer inzicht te geven in de huidige nadelige arbeidsmarktpositie van etnische minderheden ten opzichte van de etnische meerderheid. Daarnaast biedt het bestuderen van video cv's inzicht in het gebruik van dit type multimedia instrument voor selectie.

Geconcludeerd kan worden dat de percepties van de eerlijkheid en procedurele rechtvaardigheid van het video cv minder positief zijn dan de percepties van het papieren cv. Deze percepties werden bij zowel sollicitanten als recruiters aangetroffen. Kenmerken van de sollicitant spelen bij de percepties wel een grote rol. Sollicitanten uit een etnische minderheid beoordeelden het video cv als eerlijker of even eerlijk dan autochtone sollicitanten en recruiters, en dan papieren cv's. Ook bleken sollicitanten met een zwakkere arbeidsmarktpositie positiever te oordelen over het video cv vergeleken met sollicitanten die een sterkere positie hebben. Etnische minderheden, sollicitanten met beperktere taalvaardigheid en lager opgeleide sollicitanten en/of sollicitanten die lager scoorden op een cognitieve capaciteitentest waren relatief positief over het video cv. Het is mogelijk dat sollicitanten met een zwakkere arbeidsmarktpositie een meer persoonlijke manier van solliciteren prefereren (video cv) boven minder gepersonaliseerde procedures (de 'papieren persoon' uit het traditionele cv). Tot slot zagen extraverte sollicitanten meer mogelijkheden om zich te presenteren dan introverte sollicitanten. Extraverten vonden het video cv dan ook eerlijker dan introverte sollicitanten.

Percepties van eerlijkheid en rechtvaardigheid in selectie kunnen verschillen van daadwerkelijke discriminatoire selectie uitkomsten. Geconcludeerd kan worden dat gerapporteerde baanrelevante kwalificaties in papieren cv's, zoals stages, voor een deel kunnen verklaren waarom niet-westerse etnische minderheden minder makkelijk een baan op hun opleidingsniveau vinden na hun afstuderen dan autochtoon Nederlandse sollicitanten. Niet-westerse minderheden rapporteerden

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minder vaak stages op hun cv, en ook minder vaak leidinggevende posities en nevenactiviteiten zoals lidmaatschappen van verenigingen. De verschillen waren klein maar significant en resulteerden in een lagere geschiktheidsbeoordeling door ervaren recruiters. Dit resultaat wil overigens niet zeggen dat discriminatie geen rol zou kunnen spelen bij het beoordelen van cv's. Dit proefschrift rapporteerde ook dat kenmerken van de recruiter, zoals vooroordelen tegen etnische minderheden, van invloed blijken te zijn op de beeldvorming op basis van het cv, ook bij het video cv.

Het gebruik van video cv's in de selectiepraktijk heeft voor- en nadelen, net als elk type selectie-instrument. De keuze voor bepaalde selectie-instrumenten vormt dan ook altijd een compromis (Cook, 2009). Video cv's kunnen overwogen worden voor selectie als het van belang wordt geacht om sollicitanten de gelegenheid te geven om op een meer persoonlijke wijze te solliciteren, zodat juist sollicitanten met een zwakkere arbeidsmarktpositie kunnen worden aangetrokken. Daarnaast kan het worden ingezet als extraversie van belang wordt geacht voor de te vervullen vacature. Het onderzoek uit dit proefschrift geeft geen aanleiding om aan te nemen dat video cv's tot meer discriminatie tegen minderheden zullen leiden vergeleken met het papieren cv.

Tegelijkertijd is terughoudendheid op zijn plaats bij het overwegen van video cv's als onderdeel van de selectieprocedure, omdat in de gerapporteerde studies werd aangetoond dat recruiters en hoger opgeleide sollicitanten juist het papieren cv als eerlijker en meer baangerelateerd waarnemen, vergeleken met het video cv. Ook is er nog veel onbekend over de voorspellende waarde in het screenen van video cv's, vergeleken met andere veelgebruikte screeningsinstrumenten zoals het papieren cv. Een beter begrip van screening via het video cv en andere vormen van multimediatests in selectie is ondermeer van belang omdat de demografische samenstelling van Westerse landen pluriformer wordt en het verschil in toegang tot werk voor etnische groepen hardnekkig blijft bestaan. Gegeven de snelle groei van het gebruik van multimediatests in selectie, waaronder het gebruik van video cv's, blijft het belangrijk om de toegevoegde waarde en eerlijkheid van dit type cv te blijven beoordelen. Op deze manier kan een accurate en eerlijke evaluatie van personen op de arbeidsmarkt bevorderd worden.

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Dankwoord

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The End

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Annemarie
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Curriculum Vitae

Annemarie Hiemstra was born in Waalwijk, the Netherlands, on February 19th 1978. She completed her secondary education in 1996 at the Willem van Oranje College in Waalwijk. Annemarie received her Master's degree in Industrial and Organizational Psychology in 2001 at the VU University Amsterdam. Her published master thesis was on micro-entrepreneurship, and it was a result of her research internship in Vietnam. During her study, Annemarie worked as a student-assistant and a trainer at the Campus Career Counselors office. Since her graduation, Annemarie has been combining research with working as a trainer and consultant. First at the Netherlands Organization for Applied Sciences (TNO). And since 2005 she has been working at GITP, a human resources consultancy firm. Concurrently to her consultancy position, Annemarie started a PhD project at the Organizational Psychology department of the Erasmus University Rotterdam, in April 2008. Annemarie joined the Erasmus University Rotterdam as an Assistant Professor in September 2012. Annemarie Hiemstra lives in Rotterdam, together with her husband Koen and their two daughters.

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