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What a Difference Your E-Mail Makes: Effects of Informal E-Mail Addresses in Online Résumé Screening

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Abstract

Résumés are screened rapidly, with some reports stating that recruiters form their impressions within 10 seconds. Certain résumé characteristics can have a significant impact on the snap judgments these recruiters make. The main goal of the present study was to examine the effect of the e-mail address (formal vs. informal) used in a résumé on the hirability perceptions formed by professional recruiters (N=73). In addition, the effect of the e-mail address on hirability perceptions was compared to the effects of spelling errors and typeface. Participants assessed the cognitive ability, personality, and the hirability of six fictitious applicants for the job of an HR specialist. The hirability ratings for the résumés with informal e-mail addresses were significantly lower than the hirability ratings for résumés that featured a formal e-mail address. The effect of e-mail address was as strong as the effect of spelling errors and stronger than that of typeface. The effect of e-mail address on hirability was mediated by perceptions of conscientiousness and honesty-humility. This study among actual recruiters shows for the first time that the choice of the e-mail address used on a résumé might make a real difference.

Introduction

THE RÉSUMÉS OF APPLICANTS allow recruiters to perform an initial screening of whether applicants possess the knowledge, skills, abilities, and other characteristics required for the job. The initial screening of applicants' résumés can lead to strong first impressions regarding their hirability.² In order to influence these first impressions, there is plenty of advice from both practitioners and academics on the "DOs" and "DON'Ts" for developing résumés.3 However, much of this advice has little empirical support.² The main goal of the present study is to examine the effect of the e-mail address (formal vs. informal) one uses in a résumé on the hirability perceptions formed by professional recruiters. The effect of the e-mail address on hirability perceptions are compared to the effects of spelling errors and typeface. Furthermore, why the e-mail address affects hirability perceptions is examined by investigating the mediating effects of personality and cognitive ability judgments.

Impression models

According to Brunswik,⁴ observers can perceive underlying constructs through elements of the environment that serve as a lens. Judgments of a criterion are made on the basis of cues with different ecological validities, where ecological

validity is the correlation between the cue and the variable to be predicted.⁵ Furthermore, cues differ in their use by an observer, where cue utilization is the correlation between the cue and the inference drawn by the observer. An observer's accuracy can be captured by the correlation between the inference drawn and the variable to be predicted.

Building on Brunswik's⁴ lens model, Gosling et al.⁶ proposed several mechanisms by which individuals impact their environment in ways that can guide observers to form impressions of personality. They specify two categories by which personality is manifested in physical environments: identity claims (self-directed and other-directed) and behavioral residues (interior and exterior). Self-directed identity claims are symbolic claims made by occupants for the purpose of reinforcing their self-perceptions. Other-directed identity claims are symbolic claims made by occupants for the purpose of reinforcing how they would like to be seen. Behavioral residues define personality in terms of behavioral control. This implies that "a person who is high on a particular trait would perform more acts that are prototypical of that trait than would a person who is low on that trait." ^{6(p381)} Where interior behavioral residues focus on the information available within the occupants' personal space, exterior behavioral residues extend behavior to outside the personal space. This theoretical framework was first derived from research examining 136 VAN TOORENBURG ET AL.

personality impressions based on offices and bedrooms, but can easily be extended to other contexts such as résumés. Here, it is argued that an informal e-mail address can serve as a cue to the applicant's personality and perhaps even cognitive ability and that recruiters subsequently use this first impression in their decision-making processes.

Formality of an e-mail address

Previous research has examined personality stereotypes based on (non-Internet) names and nicknames. 9,10 These studies indicated that names have a powerful influence on first impressions made by others, and therefore the formality of the email address is expected to have a powerful influence on the first impressions of recruiters as well. This might be especially true given that e-mail communication is very important and salient in organizations. ¹¹ An informal e-mail address is defined here as any e-mail address that does not refer to the owner's name but rather refers to a social, personality, or mood aspect of the owner, for instance including "Luv u" or "XOXO" (slang used by teenagers and students). 12 Previous research has suggested that applicants who use an informal e-mail address may be perceived as nonconforming and therefore as less hirable.¹³ To our knowledge, no research has actually tested whether informal e-mail addresses have any measurable effect on potential outcomes in the selection process. It is hypothesized that:

H1a: A résumé containing a formal e-mail address receives higher hirability ratings than a résumé containing an informal e-mail address.

To provide a benchmark for the effect of informal e-mail addresses in résumé screening, the effect of an informal email address is compared to the effects of two other résumé characteristics that are known to influence hirability perceptions: spelling errors and typeface. According to Charney and Rayman, ¹⁴ spelling errors influence the persuasiveness of applicants by contributing to or detracting from the applicants' credibility, and by engaging or distracting the recruiter's attention. Spelling errors have detrimental effects on hirability perceptions. ^{15,16} Charney and Rayman even showed that résumés of highly qualified applicants containing spelling errors were evaluated more negatively than résumés of less qualified applicants containing fewer errors. Most of the time, recruiters screen résumés online, and thus read them on their computer screen. A way to improve the readability of the résumés and so to attain a higher hirability rating is to use a certain typeface. 17 Shaikh and Fox 18 showed that applicants were more likely to be called for an interview when their résumé was displayed in a highly appropriate typeface than a neutral or inappropriate typeface. In the present study, the focus is on two commonly used typefaces: Times New Roman (TNR) and Arial. Arial is considered the more appropriate typeface, since Bernhard and Mills¹⁹ found that Arial is more readable on a computer screen than TNR. It is hypothesized that:

H1b: The effect of an informal e-mail address on hirability perceptions is smaller than the effect of spelling errors, yet larger than the effect of typeface.

Back et al.²⁰ used Brunswik's⁴ lens model to study the relationship between e-mail addresses and personality

traits. They showed that assessment of conscientiousness is positively related to the number of characters and the number of dots, but negatively to the number of digits. Their results also showed that the use of underscores, the use of funny and cute e-mail addresses, and the use of a fantasy name had a negative effect on the assessment of conscientiousness. E-mail addresses could also have a powerful influence on perceptions of cognitive ability, whereby those with informal e-mail addresses might be perceived as less intelligent. Both conscientiousness and cognitive ability are well-established predictors of future job performance.²¹ Since perceptions of conscientiousness and cognitive ability have been found to be related to hirability perceptions, ^{11,22} it is hypothesized that:

H2: The relationship between the formality of the e-mail address and hirability perceptions is mediated by perceptions of conscientiousness and cognitive ability.

Methods

Participants and procedure

In total, 73 recruiters (65.8% female) filled out an online survey. Their age ranged between 20 and 65 years ($M_{\rm age}$ = 28.10 years; SD = 9.16 years). The work experience of the participants ranged between 0 and 420 months (M = 21.75 months; SD = 54.80 months). Most participants obtained either a bachelor's degree (35.6%) or a master's degree (20.5%) and were involved in the recruitment process at their place of work.

Before the recruiters were contacted, a pilot study was conducted (N = 30; 67.7% female) to match the résumés used in the actual study. The age of these participants ranged between 20 and 55 years ($M_{age} = 26.07$ years; SD = 9.49years). Participants rated a total of 12 fictional résumés on personality, cognitive ability, and hirability. From these 12 résumés, six were selected for the actual study (rated for cognitive ability, personality, and hirability). The e-mail addresses were created based on the authors' personal experiences with students' e-mail addresses and those of the actual recruiters, who indicated that they frequently discover funny e-mail addresses on résumés. Based on these experiences, a variety of formal and informal e-mail addresses were created. Following previous research,²⁰ the informal e-mail addresses differed in dots, digits, and underscores, and they contained fantasy names, funny names, and cute names. To select the email addresses for this study, the participants in the pilot study were asked to rate the appropriateness of the e-mail addresses. An example of an e-mail address that the participants considered inappropriate is luv u sanne@hotmail.com, and an example of an e-mail address that the participants considered appropriate is sannejong@hotmail.com. Two informal and four formal addresses were used.

Several different professional recruitment companies participated in our study. The e-mail with the link to the survey was sent to all of their employees. The survey started with a consent form and instructions on how to complete the survey. The participants assessed the cognitive ability, personality, and the hirability of six applicants for the job of an HR specialist. Table 1 presents the characteristics of the six different résumés, which were presented in random order. The survey ended with the question: "What do you think the

Table 1. Characteristics of the Six Résumés

Résumé	Accuracy of spelling	Typeface	E-mail address
1.	Error free	Arial	Formal
2.	5 errors	Arial	Formal
3.	Error free	Arial	Informal
4.	Error free	TNR	Formal
5.	5 errors	TNR	Formal
6.	Error free	TNR	Informal

Examples of spelling errors are "humen resource manager," "personel information," and "respensibilities."

TNR, Times New Roman.

goal of the study is?" Only five participants guessed what the purpose of the study was. No significant differences were found between their responses and the other participants. Therefore, all 73 participants were included in the analyses.

Materials

Perceived cognitive ability was assessed by one item based on the current Wechsler²³ Intelligence Scale. The item stated, "Please assess in what range the intelligence quotient of the applicant would fall using the following answering ranges: 130 and above (*very superior*), 110–119 (*high average*), 90–109 (*average*), 80–89 (*low average*), 70–79 (*borderline*), and 69 and below (*extremely low*)."

Perceived personality was assessed with the brief HEX-ACO Inventory (BHI), which consists of 24 items that covered the main six dimensions of personality. The six personality dimensions are honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience (HEXACO).²⁴ The six dimensions are known to have a relatively low alpha reliability, but the test–retest stability, self–other agreement, and convergent correlations with dimensions derived from full-length scales are relatively high, and therefore the validity loss is only modest.²⁵

Hirability was assessed with Cole et al.'s²⁶ measure. Four items were chosen based on frequent use in previous research on selection decisions.^{27–29} Two items asked recruiters to indicate the likelihood that they would (a) be interested in interviewing the applicant and (b) recommend the applicant to be hired (1="extremely unlikely"; 6="extremely likely"). Recruiters were also asked, "If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?" The final item asked recruiters, "Taking everything into consideration regarding the applicant's résumé, what is your overall evaluation of the applicant?" (1="very negative"; 6="very positive"). Due to differences among scale anchors for the four items, responses were standardized before scale scores were computed.

Statistical analyses

Descriptive statistics and bivariate correlations were reported before performing linear mixed models (LMMs) to test H1a and H1b. The LMMs were run in SPSS v21.0 (MIXED procedure).³⁰ Ratings were nested within each participant and a random intercept model was used to account for the fact that multiple ratings came from the same

individual. All the models converged, and parameters were estimated with restricted maximum likelihood, which deals better with outliers than maximum likelihood. Results were upheld when the linear mixed models were bootstrapped (1,000 bootstraps; bias corrected accelerated), 31 suggesting that the results are robust. The unstandardized coefficients \pm the standard error, and the p value are reported in the results (see below). Effect sizes were calculated based on the t values and degrees of freedom from the model. For H2, a product of coefficients approach was used, 31 based on LMM.

Results

Table 2 shows the means, standard deviations, and correlations of all study variables. The demographics of the recruiters did not correlate with the assessment of hirability. Therefore, these variables were not controlled for in the analyses.

H1a was supported, as the hirability ratings regarding the résumés with informal e-mail addresses were significantly lower, $B = 0.82 \pm 0.11$, t(362) = 7.72, p < 0.001, than the hirability ratings regarding résumés that featured a formal e-mail address (Cohen's d = 0.81). The effect of the e-mail address was as strong as the effect of spelling errors, $B = 0.82 \pm 0.11$, t(362) = 7.66, p < 0.001, Cohen's d = 0.80, but both effects were larger than that of typeface, $B = 0.38 \pm 0.09$, t(362) = 4.36, p < 0.001, Cohen's d = 0.46). H1b was therefore not supported, as the effect of an informal address was as sizeable as that of spelling errors.

As described above, H2 was tested via a product coefficient approach. The path between the formality of the e-mail address and conscientiousness was significant, $B = 0.26 \pm 0.07$, t(436) = 3.40, p < 0.001. The path between conscientiousness and hirability was also significant, $^{32}B = 0.96 \pm 0.05$, t(436) =19.44, p < 0.001. The Sobel test showed that conscientiousness mediated the relationship between the formality of the e-mail address and hirability (z=3.65, p<0.001). The path between the formality of the e-mail address and cognitive ability was not significant (p=0.24). Thus, H2b was only supported for conscientiousness. In addition, the Sobel test showed that honesty-humility mediated the relationship between the formality of the e-mail address and the assessment of hirability, z = 3.89, p < 0.001. There was no evidence that other perceived personality traits mediated the relationship between the formality of the e-mail address and hirability perceptions (p > 0.05).

Discussion

This study examined whether the informality of the e-mail address used in résumés affects recruiters' hirability perceptions. The hypotheses were that a résumé containing a formal e-mail address would receive higher hirability ratings than a résumé containing an informal e-mail address; that the effect of e-mail address would be smaller than the effect of spelling errors, yet larger than the effect of typeface; and that the relationship between the formality of the e-mail address and hirability perceptions would be mediated by conscientiousness and cognitive ability perceptions.

The results show that recruiters do indeed assess the hirability of an applicant with a résumé featuring a formal email address higher than that of an applicant with a résumé

138 VAN TOORENBURG ET AL.

Table 2. Correlations, Means, and Standard Deviations for All Study Variables

1. Age 28.10 2. Gender 0.66	9.16	•	7	C	4	5	9	_	∞	6	01	II	12
2. Gender 0.66													
., ., .,	0.48	-0.02	$\widehat{\underline{\hspace{1cm}}}$										
3. Education 4.31	1.15		0.21**	$\widehat{\underline{\hspace{1em}}}$									
4. Experience 21.75	54.48		0.11*	-0.01	$\widehat{\underline{\hspace{1cm}}}$								
ility	99.0		-0.02	0.02	0.03								
6. Honesty-humility 3.12	0.46	1	-0.01	-0.00	-0.12*	0.18**	(0.68)						
	0.36		-0.01	0.02	0.02	-0.07	-0.07	(0.63)					
8. Extraversion 3.56	0.47	-	-0.07	-0.15**	-0.06	0.00	0.13**	-0.20**	(0.88)				
9. Agreeableness 3.14	0.46		-0.01	-0.14**	-0.03	0.00	0.22**	-0.06	0.21**	(0.73)			
10. Conscientiousness 3.12	0.76		0.05	-0.06	-0.01	0.36**	0.36**	-0.29**	0.23**	0.14**	(0.78)		
11. Openness to experience 3.05	0.42		0.00	0.02	0.00	0.17**	0.03	-0.14**	0.20**	0.0	0.16**	(0.57)	
12. Hirability 3.97	1.07	'	-0.03	-0.01	0.02	0.63**	0.31**	-0.29**	0.16**	0.14**	**89.0	0.15**	(0.87)

Gender: 0= "male," 1= "female"; education: 1 = "less than high school," 2 = "high school," 3 = "lower vocational education," 4 = "higher vocational education," 5 = "bachelor's degree," 6 = "master's degree". Experience in recruitment/HR in months. Coefficient alphas are on the diagonal.

*p < 0.05; **p < 0.01.

featuring an informal e-mail address. The effect of using an informal e-mail address turned out to be as detrimental as the effect of spelling errors. These results are consistent with studies on nicknames and e-mails, showing that characteristics of e-mail addresses can exert a strong influence on first impressions. 9,10 Conscientiousness mediated the relationship between informality of the e-mail address and hirability perceptions. These results are consistent with earlier research that showed that ratings of conscientiousness were negatively related to the use of underscores, cute e-mail addresses, and a fantasy name, especially if these names were self-enhancing or funny. 20 Cognitive ability did not mediate the relationship between the formality of the e-mail address and the assessment of hirability. It is possible that cognitive ability did not have a measurable effect due to the fact that all résumés were of applicants with at least a bachelor's degree.

Perceptions of honesty-humility also mediated the relationship between the informality of the e-mail address and hirability perceptions. Honesty-humility has been linked to organizational performance because people who score higher on honesty-humility show more cooperative behavior³³ and less counterproductive work behavior.³⁴ Honesty-humility has also been found to be negatively related to narcissism.^{35,36} Narcissistic people, who lack humility, modesty, and fairness, have been found to use more self-enhancing e-mail addresses.²⁰ Thus, the informal e-mail addresses may have caused low honesty-humility perceptions and therefore lower hirability rating due to its implicit association with narcissism.

In summary, the results showed that when writing a résumé, it is important to use a formal e-mail address. The initial screening of an applicant's résumé can strongly influence first impressions. Even "small" résumé characteristics, such as the e-mail address, can determine a positive or negative impression by recruiters. It should be noted that there are several limitations of this study. First, recruiters had to rate the cognitive ability, then the personality, and lastly the hirability of the applicants. Therefore, recruiters might have (un)consciously based their hirability perceptions on the assessment of cognitive ability and personality. While the ecological validity of our study benefits from using a nonstudent sample, the study sample was modest and limited to a very specific sample in the Netherlands. Second, the job profile was very specific (HR specialist), and the result might therefore not generalize to other job profiles. Lastly, this research only used a limited range of e-mail addresses. Further research using a broader range is necessary to validate our results.

In spite of these limitations, this study shows for the first time that the choice of the e-mail address one uses on a résumé might make a real difference. Informal e-mail addresses convey additional information in a social setting about one's personal interests, personality, and/or identity. Their use might therefore have adverse effects when applying for a job. Based on these findings, it is recommended that applicants always report a formal e-mail address on their résumé, that they check their spelling carefully, and that they use an appropriate typeface such as Arial. Recruiters should be aware of the inferences they make based on relatively basic résumé characteristics, since these inferences might not always be correct. Testing trait and ability inferences using additional validated tests is strongly recommended. Finally, employment agencies could use the knowledge gained from the present study in their application training programs and

by creating a résumé template for their clients that will enhance the likelihood of being hired.

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References

- Cole MS, Feild HS, Giles WF, et al. Job type and recruiters' inferences of applicant personality drawn from resume biodata: their relationships with hiring recommendations. International Journal of Selection & Assessment 2004; 12:363–367.
- 2. Knouse SB. Impressions of the resume: the effects of applicant education, experience, and impression management. Journal of Business & Psychology 1994; 9:33–45.
- Feldman DC, Klich NR. (1991) Impression management and career strategies. In Giacalone RA, Rosenfeld P, eds. Applied impression management: how image making affects managerial decisions. Newbury Park, CA: Sage, pp. 67–80.
- Brunswik E. (1956) Perception and the representative design of psychological experiments. Oakland, CA: University of California Press.
- Hursch CJ, Hammond KR, Hursch JL. Some methodological considerations in multiple-cue probability studies. Psychological Review 1964; 71:42–60.
- Gosling SD, Ko SJ, Mannarelli T, et al. A room with a cue: personality judgments based on offices and bedrooms. Journal of Personality & Social Psychology 2002; 8:379–398.
- Buss DM, Craik KH. Act prediction and the conceptual analysis of personality scales: indices of act density, bipolarity, and extensity. Journal of Personality & Social Psychology 1983; 45:1081–1095.
- 8. Vazire S, Gosling SD. e-Perceptions: personality impressions based on personal websites. Journal of Personality & Social Psychology 2004; 87:123–132.
- 9. Leirer VO, Hamilton DL, Carpenter S. Common first names as cues for inferences about personality. Personality & Social Psychology Bulletin 1982; 8:712–718.
- Mehrabian A. Characteristics attributed to individuals on the basis of their first names. Genetic Social & General Psychology Monographs 2001; 127:59–88.
- 11. Burns GN, Christiansen ND, Morris MB, et al. Effects of applicant personality on résumé evaluations. Journal of Business & Psychology 2014; 1–19.
- 12. Crystal D. (2001) *Language and the Internet*. Cambridge: Cambridge University Press.
- Workman JE, Johnson KK. Effects of conformity and nonconformity to gender-role expectations for dress: teachers versus students. Adolescence 1994; 29:207–223.
- 14. Charney DH, Rayman JR. The role of writing quality in effective student resumes. Journal of Business & Technical Communication 1989; 3:36–53.
- Charney DH, Rayman JR, Ferreira-Buckley L. How writing quality influences readers' judgments of résumés in business and engineering. Journal of Business & Technical Communication 1992; 6:38–74.

- McDowell EE. Perceptions of the ideal cover letter and ideal résumé. Journal of Technical Writing & Communication 1987; 17:179–191.
- 17. Ling J, Van Schaik P. The influence of font type and line length on visual search and information retrieval in web pages. International Journal of Human–Computer Studies 2006; 64:395–404.
- 18. Shaikh D, Fox D. (2008) Does the typeface of a resume impact our perception of the applicant http://surl.org/usabilitynews/101/pof.asp (accessed Dec. 22, 2014).
- 19. Bernard M, Mills M. (2000) So, what size and type of font should I use on my website? http://psychology.wichita.edu/surl/usabilitynews/22/font.asp (accessed Dec. 22, 2014).
- 20. Back MD, Egloff B, Schmukle SC. How extraverted is honey.bunny77@hotmail.de? Inferring personality from email addresses. Journal of Research in Personality 2008; 42:1116–1122.
- 21. Schmidt FL, Hunter, JE. The validity and utility of selection methods in personnel psychology: practical and theoretical implications of 85 years of research findings. Psychological Bulletin 1998; 124:262–274.
- 22. Carless S, Waterworth R. The importance of ability and effort in recruiters' hirability decisions: an empirical examination of attribution theory. Australian Psychologist 2012; 47:232–237.
- 23. Wechsler D. (2001) Wechsler Individual Achievement Test—Second Edition. San Antonio, TX: Psychological Corporation.
- Lee K, Ashton MC. Psychometric properties of the HEX-ACO Personality Inventory. Multivariate Behavioral Research 2004; 39:329–358.
- 25. De Vries RE. The 24-item Brief HEXACO Inventory (BHI). Journal of Research in Personality 2013; 47:871–880.
- 26. Cole MS, Rubin RS, Feild HS, et al. Recruiters' perceptions and use of applicant résumé information: screening the recent graduate. Applied Psychology: An International Review 2007; 56:319–343.
- 27. Cable DM, Judge TA. Interviewers' perceptions of personorganization fit and organizational selection decisions. Journal of Applied Psychology 1997; 82:546–561.
- 28. Kristof-Brown AL. Perceived applicant fit: distinguishing between recruiters' perceptions of person–job and person–organization fit. Personnel Psychology 2000; 53: 643–671.
- Singer MS, Bruhns C. Relative effect of applicant work experience and academic qualification on selection interview decisions: a study of between-sample generalizability. Journal of Applied Psychology 1991; 76:550– 559.
- 30. West B, Welch KB, Galecki AT. (2006) Linear mixed models: a practical guide using statistical software. London: CRC Press.
- 31. Carpenter J, Bithell J. Bootstrap confidence intervals: when, which, what? A practical guide for medical statisticians. Statistics in Medicine 2000; 19:1141–1164.
- Sobel ME. Asymptotic confidence intervals for indirect effects in structural equation models. Sociological Methodology 1982; 13:290–312.
- 33. Zettler I, Hilbig BE, Heydasch T. Two sides of one coin: honesty-humility and situational factors mutually shape social dilemma decision making. Journal of Research in Personality 2013; 47:286–295.
- 34. Wiltshire J, Bourdage JS, Lee K. Honesty-Humility and perceptions of organizational politics in predicting workplace

140 VAN TOORENBURG ET AL.

- outcomes. Journal of Business & Psychology 2014; 29: 235–251.
- 35. Lee K, Ashton MC, Wiltshire J, et al. Sex, power, and money: prediction from the dark triad and honesty–humility. European Journal of Personality 2013; 27:169–184.
- 36. Johnson MK, Rowatt WC, Petrini L. A new trait on the market: honesty-humility as a unique predictor of job performance ratings. Personality & Individual Differences 2011; 50:857–862.

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