

Dutch-Flemish Network for Recruitment and Selection Research



Preliminary Program

14th Dutch-Flemish Research Meeting on Personnel Selection and Recruitment

Amsterdam, October 18, 2019

Erasmus Universiteit Rotterdam
Faculteit Sociale Wetenschappen
Department of Psychology
Education & Child Studies
Postbus 1738
3000 DR Rotterdam
Tel: +31 10 408 8799
e-mail: born@fsw.eur.nl

Rijksuniversiteit Groningen
Faculteit Gedrag- en
Maatschappijwetenschappen
Psychometrie en Statistiek
Grote Kruisstraat 2/1
9712 TS Groningen
Tel: +31 50 363 6339
e-mail: r.r.meijer@rug.nl

Host:



Preliminary program 14th annual meeting Dutch-Flemish Network for Recruitment and Selection Research

Friday October 18, 2019

Vrij Universiteit Amsterdam, Main Building, Aurora

9.15-9.45	Coffee & tea
9.45-10.00	Welcome
10.00-11.00	Keynote prof. dr. Cornelius König (University of Saarbrücken) <i>Psychological perspectives on algorithm-based personnel selection</i>
11.00-11.15	Coffee break
11.15-11.40	Presentation Jarno Vrolijk (University of Amsterdam) <i>Exploiting hyperbolic embeddings to infer a skills hierarchy from job vacancies</i>
11.40-12.05	Presentation Lien Wille (Ghent University) <i>The effect of job titles on job attraction: Context (in)dependent?</i>
12.05-12.30	Presentation dr. Annika Wilhelmy (University of Zurich) <i>Zooming in on language: How applicants and interviewers adapt their impression management to each other</i>
12.30-13.45	Lunch
13.45-14.45	Keynote dr. Cynthia Liem (TU Delft) <i>AI and job candidate screening: The recipe for success?</i>
14.45-15.10	Presentation Marvin Neumann (University of Groningen) <i>Reducing the scientist-practitioner gap in decision-making for selection: An investigation of different approaches to the autonomy-validity dilemma</i>
15.10-15.25	Coffee break
15.25-15.50	Presentation Aylin Koçak (Ghent University) <i>When job ads turn you down</i>
15.50-16.15	Presentation Chantal van Anandel (Erasmus MC) <i>How broad sampling of assessment increases impartial grading</i>
16.15-16.40	Presentation Antonis Koutsoumpis (Vrije Universiteit Amsterdam) <i>Automatic personality assessment from video interviews</i>
16.40-17.00	Closing remarks
17.00-18.00	Drinks
18.15	Dinner at Gustavino

Abstracts

Psychological perspectives on algorithm-based personnel selection

Cornelius König¹ & Markus Langer¹

¹Saarland University, Saarbrücken, Germany

Personnel selection can look back to a long and successful history, and many of our tools have been in use since decades. Nevertheless, the assumption that personnel selection will largely stay the same in the future is likely wrong. Specifically, advances in computer science and in particular machine learning challenge the ways of and means of personnel selection. Machine learning has been shown to be promising for many tasks, from optimizing health care decisions to autonomous driving, and it will likely also change personnel selection. Although the developments are mainly driven by computer scientists, some psychologists try to follow these developments closely and aim at fostering our understanding of these developments, and our team at Saarland University belongs to these psychologists. The goal of this talk is therefore to give an overview of recent studies in this field conducted by our research department. These studies tackle questions such as “Do applicants behave differently when experiencing algorithm-based interviews?”, “How do applicants react to algorithm-based interviews?”, and “How do recruiters react if they have reasons to believe that an algorithm provided biased recommendations?”. In total, these studies show how important it is that more personnel selection researchers contribute with their psychological know-how and empirical approaches to the discussion on algorithm-based ways of personnel selection.

Exploiting hyperbolic embeddings to infer a skills hierarchy from job vacancies

Jarno Vrolijk¹, Stefan Mol¹, & Gábor Kismihók²

¹Amsterdam Business School, University of Amsterdam, Amsterdam, The Netherlands

²Leibniz Information Centre for Science and Technology (TIB), Hannover, Germany

The rate at which the job market is continuously changing leaves job seekers feeling uninformed about the skills that they should acquire in order to attain and sustain their employability (Sibarani, Scerri, Morales, Auer, & Collarana, 2017). Educators too, are struggling to offer courses that meet the expectations of fast-evolving sectors (Sibarani et al., 2017). The complexity of many contemporary job roles means that little is known about the specific skills of which they are comprised, and how insights into hierarchical skills structures can be leveraged to enhance specific skills and sub-skills. Inference pertaining to the actual job demands and efforts, and capturing them in fully adequate taxonomies of job characteristics has been narrow, incomplete, and problematic (Binning et al., 1989; Morgeson & Humphrey, 2006). Even taxonomies constructed from large resources like Wikipedia or WordNet may lack domain specific and long-tailed knowledge. These problems call for the development of a conceptually more coherent criterion that better captures the context and reality in which the criterion judgments are made through dynamic taxonomies (Austin, & Villanova, 1992; Tett et al., 2009; Ones & Viswesvaran, 1996). Further increases in the scalability and the quality of the hypernymy extraction are key. Therefore, this study proposes a domain-specific method for the induction of dynamic taxonomies from job vacancies and educational curricula through current state-of-the-art knowledge representation methods.

The effect of job titles on job attraction: Context (in)dependent?

Lien Wille¹, Bert Weijters¹, & Eva Derous¹

¹Department of Personnel Management, Work and Organizational Psychology, Ghent University, Belgium

Employee recruitment literature shows that job content-related information such as pay, affects job seekers' attraction (Uggerslev, Fassina, & Kraichy, 2012). Remarkably, however, the employee recruitment literature has not yet looked at the effects of job titles (i.e., another type of job content-related information) on attraction. In addition, whereas context-related information effects are examined in marketing and consumer behavior, this has not yet been considered much in job ads. We therefore investigated whether the type of job title (typical vs. hybrid) affected job attraction. Moreover, we considered mediation effects of perceived typicality and whether context-related information (i.e., job titles are presented among other job titles vs. not) moderates the mediated relation. Results show that job title affected job attraction through perceived typicality when job titles are not presented among other job titles, but not when they are presented among other job titles. Hence, our findings suggest that the effects of content-related information may depend on context-related information and, thus, that context-related information should also be taken into account.

Zooming in on language: How applicants and interviewers adapt their impression management to each other

Annika Wilhelmy¹, Timothy Wingate², & Nicolas Roulin³

¹University of Zurich, Switzerland

²University of Calgary, Canada

³Saint Mary's University, Canada

In employment interviews, both applicants and interviewers aim at making good impressions. Although research has long examined applicants' use of impression management (IM) behaviors, interviewers' IM has only been recently investigated, and no research has attempted to integrate both. The aims of this research were to examine whether and how applicants and interviewers adapt their IM to one another. To answer these questions, we bring together IM and the concept of adjacency pairs from linguistics. We carried out an observational study with field data (N = 30 interviews with 6'290 turns of speech). Results showed that IM adaptation naturally occurs in real interviews and that both applicants and interviewers adapt their IM to one another in patterns of preferred IM responses (i.e., self-focused IM as response to other-focused IM, other-focused IM as response to self-focused IM and job/organization-focused IM as response to job/organization-focused IM). Furthermore, these patterns not only predominate when examining two turns of speech, but also across longer exchanges such as three turns of speech. Altogether, our linguistic approach and findings afford new insights into the dynamics of interpersonal influence in employment interviews.

AI and job candidate screening: The recipe for success?

Cynthia C. S. Liem¹

¹Faculty of Electrical Engineering, Mathematics and Computer Science, Delft University of Technology, The Netherlands

In our rapidly digitizing world, artificial intelligence (AI) techniques—especially, algorithmic techniques in which machine learning is applied to big data—have gained broad interest. Also in the personnel selection domain, such techniques have been claimed to be more objective, more scalable, and even more accurate than human judgment. However, in parallel, concerns about bias and (un)fairness have arisen. Should or shouldn't we trust the algorithm as a better alternative to traditional practice? In this presentation, I will argue that this may not be the right question to ask. Epistemologically, there are fundamental differences between the way data is seen from a psychological and machine learning perspective, making insights from these disciplines less comparable than they originally may seem. In line with this, I will give various practical examples of common misconceptions and misunderstandings with regard to what AI can practically do. This does not mean that AI and job candidate screening are a combination to avoid. However, to make the combination successful, all involved disciplines need to be willing to critically reflect on their respective strengths and weaknesses. Sourcing from various experiences in working across disciplines, I will share some thoughts on how this may concretely and practically be done.

Reducing the scientist-practitioner gap in decision-making for selection: An investigation of different approaches to the autonomy-validity dilemma

Marvin Neumann¹, A. Susan M. Niessen¹, Jorge N. Tendeiro¹, & Rob R. Meijer¹

¹Department of Psychometrics and Statistics, Faculty of Behavioral and Social Sciences, University of Groningen, The Netherlands

Decision-makers often combine information such as test scores and personal statements holistically, even though a decision-rule often yields more valid decisions (Kuncel et al., 2013). While decision-makers report higher intentions to use decision-rules when they have autonomy over them (Nolan & Highhouse, 2014), increased autonomy should not result in substantial validity loss. We investigated the effect of varying degrees of autonomy on use intentions and predictive validity. In a within-subjects design, participants ($N = 150$) predicted students' academic performance based on their high school grade, an admission test score, and a personal statement. Participants judged five cases in each of four conditions: (1) holistic judgment, (2) determining predictor weights for each case individually, (3) determining general predictor weights across cases, and (4) unrestrictedly adjusting optimal decision-rule predictions. Additionally, in a fifth condition, (5) participants imagined that they had to rely solely on the optimal decision-rule predictions. Participants' perceived autonomy, use intentions, satisfaction with, and confidence in these judgment procedures were measured after each condition. Use intentions were high when participants could determine general predictor weights and adjust decision-rule predictions. However, predictions made in these conditions did not show higher predictive validity than the holistic judgments.

When job ads turn you down

Aylin Koçak¹, Eva Derous¹, & Lien Wille¹

¹Department of Personnel Management, Work and Organizational Psychology, Ghent University, Belgium

Youth unemployment is high, despite the war for talent. Although (lack of) human capital and hiring discrimination may explain youth unemployment to some extent, few studies considered whether (qualified) young job seekers might self-select out early in the application process. This study considered this and investigated if type of required traits and their wording in job ads influenced younger job seekers' job attraction and decision to apply, as well as how they experienced such requirements. Younger job seekers found job ads less attractive if they had negative meta-stereotypes about the required traits mentioned in the profile. This was even more so for traits that were worded in a dispositional way (using adjectives), emphasizing the unchangeable nature of the trait. Young job seekers also refrained from applying for ads with negatively meta-stereotyped traits, even when they were qualified for these traits. How young job seekers experienced the negatively meta-stereotyped traits in job ads depended on whether they believed they were qualified for the trait or not. Those job seekers who believed they possessed the negatively meta-stereotyped trait presented in the job ad felt less threatened than those job seekers who believed they did not possess this trait.

How broad sampling of assessment increases impartial grading

Chantal E.E. van Andel¹, Marise Ph. Born², Axel P.N. Themmen¹, & Karen M. Stegers-Jager¹

¹Institute of Medical Education Research Rotterdam, Erasmus MC, The Netherlands

²Department of Psychology, Erasmus University Rotterdam, The Netherlands

Clinical evaluations during clerkships vary across students with different ethnicities, favoring students without a migration background. Students' clinical competencies used to be assessed with one global evaluation at our medical school, but are now assessed by broad sampling, which means assessment by multiple (ethnic majority) assessors, across multiple moments using multiple types of tests. Final grades are calculated on the basis of an algorithm. Broad sampling could compensate for variance in evaluations that is not due to students' true competencies. This study investigates whether 1) clinical grade differences related to student ethnicity are 1) smaller in broadly sampled assessment as compared to one global assessment and 2) reintroduced when supervisors are allowed to deviate from broadly sampled scores, i.e. when they do not follow the set of rules. Quantitative analyses, controlling for students' gender, age, (im)migration status, and average bachelor grade, supported our hypotheses. If medical education aims to be more impartial, assessment by means of broadly sampling and grade decisions by means of a set of rules are recommended. Practically, this means more standardization and less assessor freedom.

Automatic personality assessment from video interviews

Antonis Koutsoumpis¹, Reinout E. de Vries¹, Ward van Breda¹, Djurre Holtrop², & Janneke K. Oostrom¹

¹Vrije Universiteit Amsterdam, The Netherlands

²Curtin University, Perth, Australia

The advance of sophisticated artificial intelligent methods offers new possibilities for personality assessment, giving rise to a new line of research aiming to assess personality using machine learning techniques. After a brief overview of the automatic personality assessment literature, two studies – aimed to collect video data from personality interviews – will be described. The video data will be decomposed into three modalities: verbal (the words people use), para-verbal (voice characteristics; e.g., pitch, intensity, speech rate), and non-verbal features (facial expressions), each of which has been previously associated to some extent with personality traits. Machine learning techniques will be applied to explore how these modalities – independently and in combination – are related to self-reported personality traits using the HEXACO personality model. The final goal of the two studies is to develop an algorithm (software) that will automatically assess personality from video interviews, and test whether it constitutes a valid and accurate assessment instrument.