This preprint version may not exactly replicate the final version published in Journal of Business and Psychology. It is not the version of record and is therefore not suitable for citation. Coypright: König, C. J., Jöri, E., & Knüsel, P. (2011). The amazing diversity of thought: A qualitative study on how selection procedures are perceived by their users. *Journal of Business and Psychology 26*, 437-452. doi:10.1007/s10869-010-9199-9

The amazing diversity of thought: A qualitative study on how

human resource practitioners perceive selection procedures

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Abstract

Purpose – In the field of personnel selection, a great deal of evidence shows a gap between what scientists think practitioners should do and which procedures practitioners actually use. To build a basis for an intensified dialogue between practitioners and researchers, there is a need for better knowledge about how practitioners think about selection procedures.

Approach – The authors used the repertory grid technique, a well-established interview method that elicits cognitions. Forty human resource practitioners were interviewed.

Findings – The results highlight the diversity of the individual ways in which practitioners think about selection procedures. First, none of the constructs elicited was mentioned by two thirds of the interviewees or more, and only five were mentioned by half or more of the interviewees. Second, interviewees often did not agree which construct pole they preferred. Third, individual maps of the constructs and procedures revealed many differences. Sample constructs were whether a procedure reveals something about the status quo or something about a candidate's past, whether the human resource department has an active or a passive role in the selection process, and whether or not a procedure is fakable.

Implications – The results suggest many new research questions and will hopefully foster the dialogue between scientists and practitioners.

Originality/value – This is one of the first studies to explore practitioners' cognitions regarding selection procedures, and represents a rare application of the repertory grid technique to the selection field.

Keywords: personnel selection procedures; scientist-practitioner gap; diversity of thinking; repertory grid technique; qualitative research

The amazing diversity of thought: A qualitative study on how selection procedures are perceived by their users

The hope of academics is that practitioners will read research reports in the academic journals, consider the research as relevant, and follow the implications laid out at the end of the articles. Unfortunately, the evidence rather speaks against this. Practitioners rarely read academic journals (Rynes, Colbert, & Brown, 2002) and often consider research as contradictory, not very relevant and not applicable (Buckley, Ferris, Bernardin, & Harvey, 1998; Terpstra & Rozell, 1998). Even worse, there is often a world of difference between what practitioners do and what academic research tells them. This is the often lamented gap between scientists and practitioners – a gap perceived from both sides (e.g., Aguinis & Pierce, 2008; Anderson, 2007; Cascio & Aguinis, 2008; Cohen, 2007; Deadrick & Gibson, 2009; Rynes, Bartunek, & Daft, 2001; Sanders, van Riemsdijk, & Groen, 2008; Shapiro, Kirkman, & Courtney, 2007). Bridging this gap is also an explicit goal of the *Journal of Business and Psychology* (Rogelberg, 2009).

The scientist-practitioner gap is especially well documented in the area of personnel selection. Human resource (HR) practitioners across the world often use procedures with relatively low predictive validity, whereas more valid procedures are not used as regularly as scientists advise (e.g., Di Milia, 2004; Furnham, 2008; König, Klehe, Berchtold, & Kleinmann, 2010; Lievens & De Paepe, 2004; Ryan, McFarland, Baron, & Page, 1999; Scholarios & Lockyer, 1999; Schuler, Hell, Trapmann, Schaar, & Boramir, 2007; Taylor, Keelty, & McDonnell, 2002; Zibarras & Woods, 2010). For example, although meta-analytic evidence supports the use of structured interviews (McDaniel, Whetzel, Schmidt, & Maurer, 1994), only 5% of the companies surveyed in Belgium by Lievens and De Paepe (2004) used interviews in which all main and follow-up questions were determined a priori and in which each individual

response of candidates was evaluated according to pre-established answers. Moreover, only 13% of Canadian interviewers reported using a rating scale to measure applicants' responses (Simola, Taggar, & Smith, 2007). Graphology is another interesting example because scientists have frequently emphasized that empirical evidence does not seem to support its use (e.g., Driver, Buckley, & Frink, 1996; Neter & Ben-Shakhar, 1989). Nevertheless, it is used occasionally in France (Ryan et al., 1999) and by 15.8% of companies in the German-speaking part of Switzerland (König et al., 2010). Furthermore, the Myers-Briggs Type Indicator continues to be widely used (e.g., Furnham, 2008) despite being criticized due to psychometric limitations (e.g., Pittenger, 2005).

As a reaction to the scientist-practitioner gap, several authors have called for more dialogue between researchers and practitioners (e.g., Anderson, 2007; Deadrick & Gibson, 2007), and a good basis for this dialogue could be provided by better knowledge about how practitioners think about selection procedures. Despite the preponderance of validity studies (e.g., Hermelin, Lievens, & Robertson, 2007; McDaniel, Hartman, Whetzel, & Grubb, 2007; Roth, Bobko, & McFarland, 2005), most researchers (and practitioners) will probably agree that validity is likely not the only aspect that practitioners have in mind when thinking about selection procedures (see also, e.g., Furnham, 2008; König et al., 2010). However, it is largely unknown what these aspects are, as is echoed in Anderson's (2005, p. 19) call for "research into practitioner beliefs". Consequently, the research question of this study was to explore which cognitions regarding personnel selection procedures HR practitioners have. To achieve this, we used a qualitative approach that gives study participants a large degree of freedom to express in their own words what they think about selection procedures, and highlights the constructs that practitioners use when thinking about selection procedures.

Why a qualitative approach

The qualitative field offers techniques to study cognitions that give study participants a large degree of freedom to express in their own words what they think, because "qualitative data derive from the participants' perspective" (Lee, Mitchell, & Sablynski, 1999, p.163). Although qualitative studies can be used for a variety of purposes (including theory testing, see e.g., Gersick, 1989), researchers often use qualitative methods to gain a better understanding of a phenomenon in as open-minded a manner as possible. Thus, qualitative researchers are often interested in staying flexible even at the expense of subsequently rendering the method section of their paper difficult to write, because the flexibility often prevents the researcher from following clear algorithms and rules, which are much more common among quantitative studies (Gephart, 2004). Another consequence is that qualitative researchers typically work with research questions instead of explicit hypotheses (Eby, Hurst, & Butts, 2009), and so did we: We did not test specific hypotheses (e.g., that HR practitioners are concerned about a certain attribute of selection procedures such as their validity). Instead, we were generally interested in practitioners' cognitions about selection procedures without given any cues that they should think about any particular attribute.

Compared to quantitative approaches to studying HR practitioners' perceptions of selection procedures (Glode, 2002; Harris, Dworkin, & Park, 1990; König et al., 2010; Lievens & De Paepe, 2004; Terpstra & Rozell, 1997), a qualitative approach holds the advantage that it does not require assumptions about what constructs should be measured. This is important because if a construct is not covered by the assumptions of the researchers, they will not use items to measure this construct, and study participants will be unable to indicate whether this construct matters to them. Although such studies have produced an important body of

knowledge, only qualitative approaches can give participants the freedom to describe their cognitions in their own words, independently of whether or not these cognitions were already in the mind of the researchers.

A particularly suitable technique for the examination of cognitions is the repertory grid technique because it stimulates study participants to think about objects of a field and asks participants to describe, in their own way, the attributes that matter to them (Easterby-Smith, Thorpe, & Holman, 1996; see the Methods section for more details). A further advantage of the repertory grid technique is that it constitutes a fairly standardized methodology (with qualitative and quantitative components, see, e.g., Easterby-Smith et al., 1996; Fransella, Bell, & Bannister, 2004). In addition, it has a long history, dating back to the constructivist George Kelly (1955), the founder of personal construct psychology (Walker & Winter, 2007). Kelly was a clinical psychologist who was interested in how people construe the world and how their constructs enable them to respond to what they experience. Kelly was convinced that individuals' constructs are likely to lack a clear definition (unlike constructs used by scientists in their argumentation). According to Kelly, individual constructs are constantly refined to achieve a better understanding of what happens and a better prediction of what can be expected.

So far, the repertory grid technique has been applied to many areas, including the field of applied psychology and management (see Jancowicz, 1990, and Fransella et al., 2004; for an overview of applications in the field of strategy see Wright, 2008). For example, it has been used to study performance appraisal systems (Wright, 2004; Wright & Cheung, 2007), the way in which leaders make judgments about the performance of their subordinates (Borman, 1987),

employees' expectations regarding mergers (Dackert, Jackson, Brenner, & Johansson, 2003), and organizational culture change (Langan-Fox & Tan, 1997). It has also been used to conduct a job analysis (Robertson, Gratton, & Rout, 1990) and has been suggested as a tool to match people to jobs and jobs to people (Anderson, 1990). Most importantly, however, the repertory grid technique has not been used so far to study how practitioners think about personnel selection procedures—the topic of this study.

Method

Context

Switzerland is a relatively small country located in the center of Europe. It is surrounded by member countries of the European Union, but it is not a member itself. Switzerland has a population of 7.4 million people, who speak four national languages: German (63.7%), French (20.4%), Italian (6.4%), or Rhaeto-Romanic (0.5%; the remaining inhabitants speak non-national languages, Bundesamt für Statistik, 2006). In most regions, one national language clearly predominates. Participants of this study were HR representatives in organizations based in a region called Central Switzerland ("Innerschweiz") within the German-speaking part. This region is located on the north side of the Alpine foothills and, historically speaking, is the origin of Switzerland. Economic differences between this region and the rest of Switzerland are rather minor (Bundesamt für Statistik, 2007).

At the time of data collection, the Swiss economy was in a healthy state, as evidenced by an unemployment rate of 3.3% (Bundesamt für Statistik, 2007). It should be noted that such low unemployment rates are fairly typical for Switzerland. In general, the economy can be characterized as fairly stable, and this is also how Swiss employees describe their employment situation (Gerber, Wittekind, Bannwart, Grote, & Staffelbach, 2007).

Swiss companies are fairly free in their decisions regarding what kind of personnel selection procedure they want to use because legal aspects play a negligible role and legal cases regarding the use of personnel selection procedures are extremely rare (Myors et al., 2008). A large study on the use of selection procedures in Switzerland (König et al., 2010) showed that nearly all companies analyze application documents (including CVs and university/school reports, 99.6%) and interview applicants (99.4%). A very large proportion of them (88.9%) also check references. Around a third reported to have used personality tests (31.9%), and about a quarter to have used assessment centers (26.5%) and work sample tests (23.8%) and to have checked records of criminal history (23.2%) in the last 18 months. However, not even one in five companies use GMA tests (18.8%). Graphology is still fairly common (15.5%), although less so than is often assumed (Bangerter, König, Blatti, & Salvisberg, 2009). Biographical questionnaires are used by 12.7% and medical examinations by 5.4%.

Interviewees

To find potential interviewees from different companies and with diverse backgrounds, we used the member list of companies organized in the Zürcher Gesellschaft für Personal-Management (Zurich's Society for Personnel Management). This organization is the largest society for HR managers in Switzerland. We randomly generated a list of companies from Central Switzerland (107 altogether) and contacted 65 companies by telephone, describing the study as an interview about personnel selection procedures using a special technique that we would describe in situ. Forty HR representatives agreed to be interviewed – a sample size that it is adequate for a technique that focuses on individuals and is larger than in previous studies (e.g., Dackert et al., 2003).

Of the 40 participants, 25 were male. Participants were an average of 48.4 years old (*SD* = 9.9), with a range between 29 and 72 years. Their average organizational tenure was 10.8 years (*SD* = 9.4). Their highest educational degree varied: Twenty of them had finished a commercial apprenticeship ("kaufmännische Lehre"), eight had a degree from a university of applied sciences ("Fachhochschule"), another eight had a degree from a university and four had an apprenticeship degree in a different area. Around half of all participants had obtained additional HR degrees, which are well-established in Switzerland ("eidgenössischer Personalleiter/in" and "eidgenössische/r Personalfachfrau/-mann"). They had an average of 16.5 years of experience in HR (*SD* = 8.8) and had filled an average of 31.1 vacant positions in the last year (*SD* = 32.6). Table 1 lists the frequency according to which research participants used personnel selection procedures in the last year. As can be seen, the use is fairly similar to other HR representatives elsewhere in Switzerland, as mentioned above (König et al., 2010).

Two participants worked in small organizations (less than 50 employees), six in small to medium-sized companies (between 50 and 249 employees), 14 in medium to large ones (between 250 and 499 employees), and 18 in large organizations (more than 500 employees). The HR departments had between 1 and 32 people (M = 6.7, SD = 6.7). The organizations were from diverse sectors, ranging from the food industry, financial industry, energy/water industry, to public administration and health and social services.

The repertory grid technique

The repertory grid technique consists of four steps (for overviews see, e.g., Easterby-Smith et al., 1996, and Fransella et al., 2004; for examples see, e.g., Langan-Fox & Tan, 1997, and Wright, 2004). The first stage is to establish the objects of thoughts (the so-called elements). Elements are often supplied by the researcher (as in our case) but they can also be generated by

the interviewees (e.g., interviewees name their coworkers). Elements should be homogenous (i.e., they should all belong to the same category), representative (i.e., adequately covering most aspects of the area under study), unambiguous (i.e., readily understood by the interviewees), and as short as possible (i.e., eight to ten elements, e.g., Easterby-Smith et al., 1996). We thus chose the following eight elements: application documents, interview, reference checks, graphology, assessment center, mental ability tests, personality tests, and medical examination. These personnel selection procedures vary in their validity (e.g., Schmidt & Hunter, 1998), the reactions they produce in applicants (Hausknecht, Day, & Thomas, 2004), and their use in Switzerland (König et al., 2010). We gave the interviewees a short description of these selection procedures to ensure a common understanding.

The second stage is the construct elicitation stage. Typically, the triadic elicitation strategy is used, which means that elements are put into triads (groups of three elements), and the interviewee is asked to describe what makes two elements similar to each other but dissimilar to the third. Often, elements are put randomly into grids, but in some grid applications one element is always included in the triad (e.g., "myself"). In general, there are no clear rules and the grid designer is asked to utilize the freedom of the technique to adapt it to the situation (Fransella et al., 2004) while giving oneself a pattern when eliciting constructs (Wright, 2004). As a pilot study with a purely random list of triads had resulted in negative reactions by participants, and in order to achieve some comparability of the responses, we generated a random list of 40 triads (with the restrictions that each selection procedure should be the first in at least one out of ten triads and that there are no duplicates of triads); all interviewees received them in the same order.

Interviewees are also asked to name the contrast pole, and both poles are written down by the interviewer. This strategy results in answers that are bipolar discriminations expressed in the

interviewee's own words, and these answers are called "constructs" in the repertory grid literature (e.g., Easterby-Smith et al., 1996). In our case, interviewees generated constructs which they used to make sense of different personnel selection procedures. This elicitation process is ideally repeated until the interviewee no longer generates any new constructs. Although it might sound like this task is fairly easy for participants, it can actually be quite difficult, as evidenced by the fact that "long periods of silence" (Easterby-Smith et al., 1996, p. 9) are often mentioned in the literature. Although this also happened in our study, interviewees gave us positive (informal) feedback regarding the repertory grid technique at the end of the interview. The interview was ended either if an interviewee no longer generated any new constructs in response to four sequential triads (62.5% of the participants) or if this part of the interview took more than one hour (37.5% of the participants), as the time given to this research project was restricted (see also Fransella et al., 2004).

The third stage consists of asking interviewees to rate all elements in terms of each selfgenerated construct. To do this, a personal grid is constructed with the elements heading the columns and the self-generated bipolar constructs in the rows. Each interviewee is asked to rate all elements on a Likert scale (in our case on a five-point scale ranging from 5 = "construct pole applies fully" to 1 = "contrast pole applies fully", but shorter and longer scales are also used, Fransella et al., 2004). Because each interviewee has his or her own construct system, each interviewee also has his or her own rating scheme. Furthermore, interviewees are asked to choose the preferred side of each construct.

In the fourth stage, the data generated by the repertory grid technique are analyzed by studying the content (i.e., which constructs were elicited) and the structure. To study the content, constructs are often sorted by writing down all constructs on small paper strips, laying them on a

table, looking for similarly worded constructs or constructs with similar meaning, and generating a label for each group (e.g., Mayring, 2000; see also Wright, 2004 as an example). We followed this procedure. More precisely, the second and the third author (who conducted the interviews) sorted all constructs together and created groups, discussing each construct. They also labeled groups together. If the two coders could not reach a consensus whether a certain construct belonged to a group or not, whether a group of constructs constituted a separate group or just a subgroup of another, or how to label a group, the first author was consulted. Thirty-five decisions required such consultation, and in these cases, all three authors discussed them and reached a solution together. To check the reliability of the decisions, an independent coder can sort the constructs to the groups (which was also done in this study).

To analyze the structure, individual repertory grid data can be subjected to quantitative analyses. The "most widely incorporated approach to analyzing grids" (Bell, 2004b, p. 148; see, e.g., Wright, 2004) is a special factor analytic approach called singular value decomposition analysis. This analysis dates back to Eckart and Young (1936) and allows a joint graphical representation both of elements (i.e., selection procedures) and constructs, which can be visually interpreted (see also Fransella et al., 2004). Research has shown that results of singular value decomposition analysis can only be interpreted if the first component of the unscaled grid is discarded (Bell, 2004a, 2004b) and if the data are standardized by scoring from the preferred pole (Mackay, 1992). We also used this approach to analyze our grids.

Procedure

Our interview protocol closely mirrored that of Langan-Fox and Tan (1997, see their Appendix for details). For instance, we introduced the repertory grid technique with the same examples as Langan-Fox and Tan. To check whether the procedure was comprehensible, the

whole repertory grid interview was pre-tested with five people who also worked in the HR field but in a different part of Switzerland.

Results

The interviewees generated a total of 422 constructs (10.6 on average, min = 6, max = 15). An average manager repeated 3.3 constructs (min = 6, max = 15). The sorting resulted in 44 groups of constructs. The reliability of the grouping was checked by an additional coder who was a trained Master's student in work and organizational psychology and who worked as a research assistant for the first author (and for other work and organizational psychology faculty members). The first author had verbally explained the background of the study, the general procedure of this study (i.e., the repertory grid technique), the purpose of this additional coding and the way how the authors had coded the data, and the student had also received a document summarizing these issues. The first author had also given him a document with all 422 constructs in alphabetical order and instructed him to place these constructs into the 44 groups (see also Wirtz & Caspar, 2002). The agreement between the final sorting made by the three authors and the independent coder was satisfactory (Cohen's kappa =.74).

Table 2 lists all 39 constructs that were generated by at least three interviewees and which pole interviewees preferred. It shows how diverse practitioners' cognitions about selection procedures are.

Singular value decomposition analyses

An inspection of all maps generated by the Gridstat program (available upon request from the first author) showed that each map was characterized by very individual solutions. Two illustrating examples can be found in Figures 1 and 2. Figure 1 shows the location of the 14 constructs generated by participant #29 and the 8 elements. This map is a two-dimensional

graphical representation of the singular value decomposition analysis run on this practitioner's data (see Table 3, for the construct correlations see Table 4). There are several interesting aspects to be noted. First, 14 constructs is a fairly high number of constructs for thinking about 8 elements, indicating the complexity of the cognition of this HR representative. Second, the element interview is very close to the constructs "to get to know each other (vs. to put the finishing touch to the impression)" and "I get a picture myself (vs. I ask for information)", suggesting that the HR representative thinks that the function of the interview is more to exchange information than to merely evaluate candidates. Third, the construct poles "holistic view (vs. only specific aspects)" and "always done (vs. done as necessary)" lie fairly close to each other, indicating that the holistic view dominates the usual practice (cf. Highhouse, 2002). Fourth, mental ability tests can lie at the opposite of the pole "always done (vs. done as necessary)" (i.e., at the pole "done as necessary"), suggesting that the participants do not consider mental ability tests to be a standard procedure (cf. König et al., 2010). At the same time, graphology is in the middle between both poles, implying that it is perceived as a reasonably common selection procedure (see also König et al., 2010).

Figure 2 shows another illustrative map (of participant #11), which is again a visualization of the singular value decomposition analysis (see Table 5, for the construct correlations see Table 6). In this map, it is particularly interesting to note where personality tests and mental ability tests are situated. They are very close to each other and relatively close to the construct "situation now (vs. in retrospect)", the latter finding indicating that this HR representative considers the results of these tests primarily as evidence of the current ability and personality – a consideration that would be consistent with the idea that personality and GMA are not very stable (even though the academic literature [e.g., Roberts & DelVecchio, 2000]

suggests that they are stable). Opposite to personality and mental ability tests lies the construct "active evaluation by HR department (vs. information given)", suggesting that the HR representative perceives the HR department as passive if it uses these tests – a potential reason why this person never uses mental ability tests, and uses personality tests only rarely.

Discussion

This interview study shows the amount and the diversity of the individual ways in which practitioners think about personnel selection procedures. Thus, the main contribution of this study lies in its use of the repertory grid technique to document the complexity of thinking of practitioners. Furthermore, this technique elicited several constructs that seem to matter for practitioners and deserve more research attention.

The individuality of cognitions is shown by three aspects. First, none of the constructs was mentioned by two thirds of the interviewees or more, and only five were mentioned by half or more of the interviewees. Second, interviewees often did not agree which construct pole they preferred. For example, thirteen preferred standardized procedures, whereas seven preferred nonstandardized ones. The proportions are similar for the construct "shows the candidate in his/her own view vs. shows the candidate as viewed by others". Interviewees did not agree at all whether "long-term axis into the past" or "status quo", or whether "specific for certain jobs" or "general" was the preferred pole. Third, the two sample maps of procedures and constructs revealed in an exemplary manner how different individual cognitions can be. Clearly, the repertory grid technique was able to reveal practitioners' individuality.

In addition, at least nine elicited constructs are worth discussing in detail because they represent new additions to the literature or are rarely studied aspects of selection procedures. First, the repertory grid technique revealed that one construct in the mind of interviewees is that

some procedures are relevant "for all positions" or "in general", whereas others are relevant "only for managers" or are "specific for certain jobs". This raises the question of why a particular procedure should not be considered to be relevant for all jobs. This is a question that has only implicitly been discussed in the academic literature, where the focus is more on the question of whether certain constructs are more relevant or less relevant for certain occupations. For example, GMA is known to be a particularly good predictor for complex jobs (Salgado et al., 2003). Such a finding could be used to suggest that GMA tests should be used less often for selecting people for low complexity jobs (although such a suggestion would ignore the finding that GMA tests still predict performance in low complexity jobs quite well, Salgado et al., 2003). Paradoxically, the scant empirical evidence so far shows that practitioners use GMA tests more often for lower level jobs than for higher level jobs (Schuler, Frier, & Kauffmann, 1993; Schuler et al., 2007). Perhaps some practitioners have certain subjective theories in their mind as to why, for example, they would not "bother" executives with a GMA test, possibly because they fear negative applicant reactions (cf. Marcus, 2003). Thus, future research should try to tackle these questions, for instance by surveying the reasons for GMA non-use.

Second, an important way to differentiate between selection procedures is to look at whether a procedure is "used for the selection process at its beginning" versus "used for the selection process in later stages" by the practitioners. Thus, they seem to consider the selection process as a sequential multistage process and some procedures as particularly relevant for some stages. Other academic and practitioner authors have already noticed that selection often entails a multistage process and have explored the implication of this phenomenon in particular with reference to adverse impact (e.g., De Corte, Lievens, & Sackett, 2006; Sackett & Roth, 1996; Schmitt, Rogers, Chan, Sheppard, & Jennings, 1997). De Corte and colleagues also suggested

that cost and logistical concerns may be reasons why organizations do not administer all predictors to all candidates. However, no research has yet explored these two reasons empirically, and research is lacking in terms of explaining which other attributes of selection procedures drive the decision to use some selection procedures primarily for early stages or primarily for later stages.

Third, the repertory grid interviews revealed that an important construct for evaluating selection procedures is whether a procedure is predominantly internally versus externally administrated - whether a part of the selection process is run in-house or by an external service provider. This construct likely reflects the trend to outsource HR activities, for example pretesting to online testing companies, and such outsourcing has been observed in many countries (see Alewell, Hauff, Thommes, & Weiland, 2009; Ordanini & Silvestri, 2008; Sheehan, 2009). Despite the commonness of outsourced parts of the selection process, the reactions of HR professionals to outsourcing such activities have rarely been studied. One exception is the recent qualitative study by Woodall, Scott-Jackson, Newham, and Gurney (2009), who found that outsourcing led to "a loss of control over quality" (p. 250). They also found little evidence that outsourcing contributed to enriched jobs for the remaining HR professionals. This converges with our finding that interviewees predominantly (but not unanimously) preferred the internal administration over the external one (21:3 votes for the internal administration). Within the selection field, the differences between internal and external administration have largely been unexplored, leaving open many avenues for future research (e.g., studying applicant reactions to internally vs. externally administered tests; testing whether outsourcing leads to quality decrements such as a validity decrease, etc.).

The fourth construct is whether the HR department has an active or a passive role in the selection process. Our interviewees clearly preferred the active role (8:0). A feeling of personal control may be psychologically triggered if a personnel selection procedure allows practitioners to be actively involved. A negative example may be the aforementioned outsourcing of testing. If organizations outsource, for example, the first stages of a selection process, internal HR's role is restricted to setting up the process together with the test vendor and to using the test results for the next step(s). Thus, outsourcing assigns a relatively passive role to HR practitioners, and the feeling of having control may not develop. This implies that models that aim at explaining the decision to outsource selection should also incorporate the feeling of control as a psychologically important variable.

Fifth, another construct – "oral vs. written" – may also be related to personal control. Possibly, a procedure that is based on written material gives the person who selects candidates less option to influence the process, thus reducing the feeling of control. This interpretation is consistent with the finding that interviewed HR representatives clearly preferred the "oral" pole (23:3). Research conducted to date has shown that different formats for presenting a test can have implications for validity (Lievens & Sackett, 2006), but this study also suggests that different formats could also be related to attitudes of HR practitioners toward selection procedures. Future research could easily study this by, for instance, manipulating the format of a test and then measuring how HR practitioners evaluate the test (a research project that would, incidentally, likely also be of interest for test vendors).

Sixth, it is interesting to note how the construct "standardized vs. nonstandardized" is evaluated: two thirds preferred the "standardized" pole, whereas the other third preferred the "nonstandardized" one. In the academic literature, standardization is predominantly discussed in

relation to interviews, which may be structured or unstructured (e.g., Campion, Palmer, & Campion, 1997; McDaniel et al., 1994). The meta-analytical evidence published so far supports the use of structured interviews in comparison to unstructured ones (McDaniel et al., 1994), and consequently, many selection researchers likely have a preference for structure. However, Dipboye already pointed out in 1997 that several reasons speak in favor of unstructured interviews. For example, he suggested that unstructured interviews may appear fairer than structured interviews, may offer the HR representative more options to influence the selection decision, and may transport the organization's cultural values better. In addition, the preference of HR representatives to rely on intuition (Highhouse, 2008) may also fit better with unstructured than with structured interviews. Dipboye explicitly stated that the reasons for not structuring interviews are based only on scant research and should thus be considered "more a list of hypotheses than a statement of fact" (p. 465). This statement still seems to be true, and the call for more research can only be repeated here. If we want to better understand why unstructured interviews remain so popular, we need to study practitioners' reasoning when deciding for or against (un-)structured interviews.

Seventh, fakability emerged as another construct among the interviewed HR representatives. This is consistent with the finding that assessors from a large US international consulting firm are concerned with faking (Robie, Tuzinski, & Bly, 2006). Although the fakability of personality tests and its consequences has been investigated in an impressive number of studies (for an overview see, e.g., Griffith & Peterson, 2006) and although researchers have started to investigate faking in interviews (Levashina & Campion, 2007), the fakability of procedures other than personality tests and interviews has largely been ignored. For example, a

considerable number of applicants seem to buy faked degrees (Bear & Ezell, 2005), but this faking phenomenon has not found its way into the selection literature.

Eighth, another fascinating construct is "long-term axis into the past vs. status quo". Our interviewees did not agree on which pole to prefer, with some indicating some valued information about the (distant) past of candidates, and others focusing more on how candidates are at the present moment. This may be due to different implicit theories of human development that practitioners have. Some may be influenced by theories such as psychoanalysis, which stresses the importance of the distant past for present behavior. Alternatively, they may simply agree with Janz that the "best prophet of the future is the past" (Janz, 1989, p. 158). However, practitioners who seem to attribute less value to information about the past of candidates may believe that the previous context could have had an important role in how candidates acted in previous jobs, but that the new job means a new context – in other words, a second chance. These individual differences in the value attributed to the past of candidates may be important for the choices regarding selection procedures, which opens another avenue for future research.

Ninth, breadth of focus emerged as another construct worthy of attention. More than half of the interviewees came up with the poles "examining several aspects" vs. "examining only a small number of aspects". This suggests that the utility of a procedure may depend on how many different pieces of information a selection procedure can reveal. For example, Figure 1 shows GMA tests being close to the pole "examining specific aspects" and graphology being closer to the "holistic view" in the cognitive map of participant #29. Despite the long history of holistic assessment of individuals (Highhouse, 2002) and its widespread use in practice (Kwaske, 2004), knowledge about holistic assessment is still restricted (for an exception see Kwaske & Morris, 2008). Thus, we can only repeat the call for more research on the use of individual psychological

assessments for personnel selection (Kwaske & Morris, 2008). In particular, research is needed that explores what makes holistic assessment so attractive.

Three additional constructs are worth discussing because they were mentioned either surprisingly seldom or not at all. The most prominent construct in this category is "high validity vs. low validity", which was only mentioned by five interviewees. Even if interviewees who mentioned the construct "high meaningfulness vs. low meaningfulness" (a construct whose connotation may include validity) are added, the number rises only to ten people. Given that the academic literature is full of validity studies and meta-analyses of validity studies (e.g., Hermelin et al., 2007; McDaniel et al., 2007; Roth et al., 2005), one could have expected this construct to play a more important role. As the preponderance of validity studies likely does not reflect the full breadth of what researchers know about selection, we hope that this study will encourage more researchers to study other aspects than validity. Another seldom mentioned construct is "cheap vs. expensive", which was also only mentioned by five interviewees. This is in contrast with previous research, which has shown that the cost of using a particular selection procedure is negatively correlated with the use or at least the intention to use (Glode, 2002; Harris et al., 1990; König et al., 2010). Perhaps the generally good economic situation in Switzerland may have downplayed the role of costs, but this should only be regarded as speculative.

A construct that did not emerge from these qualitative interviews was applicant reactions. On the one hand, this is surprising given the number of research projects in this area (e.g., Anderson, Salgado & Hülsheger, 2010; Bilgiç & Acarlar, 2010; Hausknecht et al., 2004; Ispas, Ilie, Iliescu, Johnson, & Harris, 2010; Ryan & Huth, 2008; Saks & Uggerslev, 2010) and given the correlation between HR practitioners' perception that applicants react positively towards a selection procedure and the use or at least the intention to use this selection procedure (Glode,

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2002; Harris et al., 1990; König et al., 2010). On the other hand, Sackett and Lievens (2008) raised doubts in their Annual Review of Psychology chapter as to whether applicant reactions are really that important. Their conclusion is primarily based on studies showing that applicant reactions only minimally influence actual applicant withdrawal (Ryan, Sacco, McFarland, & Kriska, 2000; Truxillo, Bauer, Campion, & Paronto, 2002). Thus, our interviewees may agree with Sackett and Lievens rather than with the applicant reaction research stream.

The discussion so far has already pointed out the many open questions that have been stimulated by this unique qualitative research. Like other authors (e.g., Bachiochi & Weiner, 2002), we consider the stimulating power of qualitative research as its main strength. We also consider qualitative research to be underused, in line with many other authors (e.g., Gephart, 2004). In particular, qualitative research is rare in the area of personnel selection despite the enormous amount of research into it (Sackett & Lievens, 2008). Hopefully, this will change and more researchers in this field will become willing to use qualitative techniques. For example, future research could use a similar approach to test whether the perception of personnel selection procedures differs between certain groups or changes over time.

A limitation of this study might be that we only mapped the cognitions of Swiss users of personnel selection procedures. Thus, we do not know to what extent our findings can be generalized to other countries. In particular, given the strong influence of the legal environment on personnel selection in the US (Myors et al., 2008), the cognitions of practitioners in the US might be heavily influenced by legal issues (e.g., the fear that disgruntled applicants who are not picked for the job might sue the organization). However, the article by Myors et al. also shows that the importance of the legal environment in the US is the exception rather than the norm worldwide. Thus, it might be possible to generalize our Swiss results to several other countries

that are, like Switzerland, relatively free of legal pressure. In any case, we would welcome studies that map the selection procedure-related cognitions of HR representatives in other countries.

A second limitation is that we had to end 15 interviews before participants had run out of constructs because our participants were only able to spend 1.5 hrs of their working time to participate in this study. Time restrictions also let us forgo the option of second round elicitations. This implies that a more extensive elicitation phase would perhaps have resulted in even more constructs. In addition, all interviewees were presented with the same list of triads in the same order and not with a purely random list of triads. Although this has the advantage of achieving more comparability, it also has the disadvantage that a random list might have contained even more variability, leading to the generation of more diverse constructs. Thus, the diversity of thinking which we document in this paper might even be underestimated.

A third limitation is that the coding process undoubtedly contained a subjective element. Surely, other ways of coding might have been possible (e.g., a practitioner as a coder or practitioners as a group of coders). We considered it important that the authors were the main coders because they conducted the interviews; thus, they had met the interviewees and knew about their particular situation--knowledge that sometimes helped to understand what the interviewees meant with a certain construct. Actually, this might also be the reason why Cohen's kappa was not higher: the independent coder only had the alphabetical list of constructs, but no other information.

This study has implications for the gap between scientists and practitioners. First and foremost, researchers interested in this dialogue should be aware of the individuality of HR practitioners' cognitions about selection procedures. If researchers keep their mind open to the

ideas of practitioners, this could be very stimulating, and consequently so rewarding that (we hope) it fosters their interest in the dialogue even though the academic system may not offer any formal rewards for researchers' involvement in this dialogue. Second, many of the research ideas that this study generated may only make sense if research projects are conducted in collaboration with practitioners – especially with practitioners who care particularly about unusual aspects (e.g., whether a selection procedure focuses on the "long-term axis into the past vs. status quo").

In addition, our research can also provide valuable information for anybody who wishes to sell a new personnel selection procedure, be it a test vendor, a consultancy, or an in-house expert who has to convince his or her colleagues. People trying to sell a procedure should take into account the highly individualistic way of thinking of HR practitioners. The main task for salespeople seems to be to figure out which attributes are particularly important for the individual whom they are trying to convince.

Conclusion

If researchers and practitioners agree that they should intensify their dialogue in order to narrow the scientist-practitioner gap in terms of personnel selection, then it is beneficial for both sides to learn more about the other. Our research contributes to this learning by demonstrating the diverse ways in which practitioners think about personnel selection procedures.

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Table 1

Interviewees	' Use	of Personne.	l Selection	Procedures
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	Always	Often	Sometimes	Seldom	Never
Analysis of application documents	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Interview	97.5 %	2.5 %	0.0 %	0.0 %	0.0 %
Check of references	32.5 %	40.0 %	15.0 %	12.5 %	0.0 %
Personality tests	5.0 %	12.5 %	25.0 %	37.5 %	20.0 %
Assessment Centers	0.0 %	7.5 %	40.0 %	37.5 %	15.0 %
Work sample tests	2.5 %	7.5 %	20.0 %	15.0 %	55.0 %
Check of records of criminal history	2.5 %	0.0 %	0.0 %	2.5 %	95.0 %
Mental ability tests	0.0 %	0.0 %	12.5 %	40.0 %	47.5 %
Graphology	0.0 %	0.0 %	22.5 %	42.5 %	35.0 %
Medical examinations	7.5 %	5.0 %	12.5 %	27.5 %	47.5 %
On the job tryout days	2.5 %	0.0 %	0.0 %	2.5 %	95.0 %

Note. N = 40. An 'on the job tryout day' ('Schnuppertag' in German) is typically an offer for applicants to spend a day at the potential new work site to become acquainted with it. Although organizations typically use this as a recruitment tool, it is also used to get to know applicants better (in particular to get an idea whether an applicant fits, see also König et al., 2010).

Table 2

Constructs Generated by at Least Three Interviewees (Sorted in Ascending Order)

	n^{a}	Preferred
Constructs		side ^b
First pole vs. second pole		
Oral vs. written	26	23:3
Examining several aspects vs. examining only a small number of aspects	25	24:1
Measuring personality vs. measuring mental abilities	24	24:0
Internal administration vs. external administration	24	21:3
Standardized vs. nonstandardized	20	13:7
Shows the candidate in his/her own view vs. shows the candidate as viewed by others	19	12:7
Measuring psychological aspects vs. measuring physical aspects	17	17:0
Often used vs. seldom used	16	14:2
The candidate viewed by the HR department vs. the candidate viewed by people external to	15	14:1
the HR department		
Objective vs. subjective	14	10:4
Used for the selection process in later stages vs. used for the selection process at its	14	8:6
beginning		
Candidate present vs. candidate absent	13	13:0
The candidate can influence the results vs. the candidate has no or only a minor	13	9:4
influence on the result		
Scientific vs. nonscientific	12	11:1
Long-term axis into the past vs. status quo	11	6:5
Measuring intelligence vs. measuring health	9	9:0
Gives you a possibility to inquire vs. you have to believe it	9	8:1
HR department is active vs. HR department is passive	8	8:0
Practical vs. theoretical	8	8:0
For all positions vs. only for managers	8	7:1
Necessary vs. supplementary	8	6:2
The candidate is judged by several people vs. the candidate is judged by one person	7	6:1
Does not require much expenditure vs. requires much expenditure	7	5:2
Procedure with one person vs. procedure with several persons at the same	7	4:3
time		
Specific for certain jobs vs. general	6	3:3
Cheap vs. expensive	5	5:0
High validity vs. low validity	5	5:0
High meaningfulness vs. low meaningfulness	5	5:0
Not fakable vs. fakable	4	4:0
Clarifies aspects in depth vs. superfluous	4	4:0
Dynamic vs. static	4	4:0
For explicating details vs. for checking preconditions	4	2:2
Binding vs. less binding	3	3:0
Candidate active vs. candidate passive	3	3:0
Candidate active vs. HR department active	3	3:0
Independent from mood states vs. dependent on mood states	3	3:0
Measuring occupational competencies vs. measuring personality	3	2:1
Focus on facts vs. focus on emotions	3	2:1
Measuring occupational competencies vs. measuring mental abilities	3	2:1

Note. ^a = number of interviewees mentioning this construct (total N = 40).

^b = number of interviewees preferring the first vs. the second pole.

Table 3

Participant #29: Construct Means, Standard Deviations, and Correlations

Co	onstructs	М	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Candidate present (vs. candidate not present)	3.00	2.00													
2	Holistic view (vs. only specific aspects)	3.00	2.00	.00												
3	Only with one person (vs. with several people)	4.50	1.32	38	.38											
4 5	Predominantly knowledge (vs. general intelligence) Candidate has a right to talk about the results (vs. interpretation	2.25	0.97	26	26	29										
	without talking to candidates)	4.25	1.39	.54	.18	20	42									
6	Knowledge & abilities (vs. health)	4.50	1.32	.38	.38	14	29	20								
7	I get a picture myself (vs. I ask for information)	2.00	1.41	.00	.35	27	.55	13	.27							
8	Several factors (vs. only one factor)	4.00	1.73	.00	.58	22	.15	31	.65	.41						
9	Always done (vs. done as necessary)	2.00	1.73	.00	.58	.22	.45	10	.22	.82	.33					
10	Oral (vs. written)	2.25	1.71	.15	15	17	.56	45	.28	.10	.42	.25				
11	Second impression (vs. first impression)	4.50	1.32	.38	38	14	29	.34	14	80	22	65	.28			
12	Personality traits (vs. health)	4.25	1.39	.18	.54	.34	42	29	.88	.13	.52	.31	.18	20		
13	To get to know each other (vs. to put the finishing touch to the impression)	2.00	1.73	.00	.58	.22	.45	10	.22	.82	.33	1.00	.25	65	.31	
14	Broad (vs. hard facts)	4.00	1.73	.00	.58	22	.15	31	.65	.41	1.00	.33	.42	22	.52	.33

Table 4

Participant #29: Singular Value Decomposition Loadings

	Components		
	1	2	
Elements			
Analysis of application documents	-2.18	0.69	
Interview	-0.71	0.12	
Check of references	0.03	-1.76	
Graphology	0.16	0.24	
Assessment Center	0.62	-1.16	
Mental ability tests	1.45	0.86	
Personality tests	0.59	0.31	
Medical examinations	0.97	0.93	
Constructs			
Candidate present (vs. not present)	0.96	0.12	
Holistic view (vs. only specific aspects)	-0.84	0.86	
Only with one person (vs. with several people)	0.24	0.88	
Predominantly knowledge (vs. general intelligence)	-0.18	-0.31	
Candidate has a right to talk about the results (vs. interpretation without talking to candidates)	0.98	1.03	
Knowledge & abilities (vs. health)	0.09	-0.37	
I get a picture myself (vs. I ask for information)	-0.88	0.14	
Several factors (vs. only one factor)	-0.55	-0.89	
Always done (vs. done as necessary)	-1.18	0.55	
Oral (vs. written)	-0.06	-1.29	
Second impression (vs. first impression)	1.48	-0.23	
Personality traits (vs. health)	-0.05	-0.02	
To get to know each other (vs. to put the finishing touch to the			
impression)	-1.17	0.53	
Broad (vs. hard facts)	-0.58	-0.88	

Table 5

Participant #11: Construct Means, Standard Deviations, and Correlations

	Constructs	М	SD	1	2	3	4	5	6	7	8	9
1	Dynamic, in action (vs. static)	3.25	1.30									
2	Candidate not absent (vs. absent)	2.00	1.73	.78								
3	Situation now (vs. in retrospect)	4.25	1.39	.38	.31							
4	Evaluation independent from evaluator (vs. dependent)	2.38	1.58	47	50	21						
5	Direct vis-à-vis (vs. group dynamics)	4.38	1.32	49	60	.02	.35					
6	Verbal (vs. written material)	2.62	1.73	.54	.79	.09	73	54				
7	Active influence by candidate possible (vs. HR department adopts hard facts)	3.00	1.32	.65	.65	.81	60	43	.60			
8	Mental (vs. physical)	4.00	1.00	.48	.00	18	.24	09	29	19		
9	Evaluated by HR department (vs. externally)	2.38	1.65	16	.22	42	.14	.28	.09	46	15	
10	Active evaluation by HR department (vs. information given)	2.50	1.58	.18	.37	.06	38	.15	.11	.00	08	.65

Note. HR = human resources.

Table 6

Participant #11: Singular Value Decomposition Loadings

	Comp	onents
	1	2
Elements		
Analysis of application documents	1.50	-1.03
Interview	-0.98	-1.27
Check of references	0.42	-0.67
Graphology	0.32	-0.17
Assessment Center	-1.88	0.50
Mental ability tests	0.77	1.12
Personality tests	0.85	1.08
Medical examinations	30	0.67
Constructs		
Dynamic, in action (vs. static)	-0.66	0.27
Candidate not absent (vs. absent)	-1.27	-0.45
Situation now (vs. in retrospect)	-0.14	0.94
Evaluation independent from evaluator (vs. dependent)	1.42	0.33
Direct vis-à-vis (vs. group dynamics)	1.26	-0.03
Verbal (vs. written material)	-1.28	-0.34
Active influence by candidate possible (vs. HR department adopts hard facts)	-0.80	0.72
Mental (vs. physical)	0.47	0.34
Evaluated by HR department (vs. externally)	0.47	-1.67
Active evaluation by HR department (vs. information given)	-0.05	-1.23

Note. HR = human resources.

Figure 1: Participant #29's cognitive map of personnel selection procedures and elicited constructs.



Figure 2: Participant #11's cognitive map of personnel selection procedures and elicited constructs (HR = human resources).

