A different look at why selection procedures work: The role of candidates’ ability to identify criteria

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Abstract
Personnel selection procedures such as assessment centers, structured interviews, and personality inventories are useful predictors of candidates’ job performance. In addition to existing explanations for their criterion-related validity, we suggest that candidates’ ability to identify the criteria used to evaluate their performance during a selection procedure contributes to the criterion-related validity of these procedures. Conceptually, the ability to identify criteria can be framed in the broader literature on peoples’ ability to read situational cues. We draw on both theory and empirical research to outline the potential this ability has to account for selection results and job performance outcomes. Finally, implications for future research are presented.

Keywords
ability to identify criteria (ATIC), personnel selection, social effectiveness, transparency, validity

Assessment centers (ACs), personality inventories, and structured interviews are popular selection procedures for many organizations (e.g., Erickson, 2004; König, Klehe, Berchtold, & Kleinmann, 2010; Schuler, Hell, Trapmann, Schaar, & Boramir, 2007). Despite the fact that these selection procedures are prognostically valid (Schmidt & Hunter, 1998), there is still a lot of speculation as to why ACs, personality inventories, and structured interviews predict job performance (e.g., Huffcutt, Conway, Roth, & Stone, 2001; Lance, Lambert, Gewin, Lievens, & Conway, 2004; Schmit & Ryan, 1993). We present the ability to identify criteria (ATIC)¹ as a complementary explanation for the criterion-related validity of these

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procedures, drawing both on theory and on the integration of existing empirical results. ATIC is defined as a person’s ability to correctly perceive performance criteria when participating in an evaluative situation. The premise underlying ATIC is that candidates in a selection procedure typically ask themselves what is actually being assessed, and that these assumptions in turn guide candidates’ behavior in the selection procedure. Thus, the concept of ATIC is based on capturing the correctness of candidates’ perceptions of the performance criteria (i.e., candidates’ assumptions regarding what is being measured) in an actual evaluative situation.

In the last decade, several studies have been conducted to examine the impact of ATIC in selection. However, neither a comprehensive overview of these separate studies nor a roadmap for future research currently exists. Therefore, this paper reviews the extant research, illustrating the potential of ATIC to serve as a complementary explanation for the criterion-related validity of popular selection procedures. Key directions for future research are also provided. We begin by introducing ATIC and its theoretical underpinnings.

ATIC: Theoretical background

Construct-related validity of personnel selection procedures

After nearly 100 years of research, it is well known that most personnel selection procedures are successful in predicting job performance (Schmidt & Hunter, 1998). Nevertheless, we also need to understand why these selection procedures work. In other words, special attention should be paid to the reasons and constructs underlying the validity of personnel selection procedures, because such knowledge might contribute to an advancement of personnel selection (Arthur & Villado, 2008; Klimoski, 1993; Schmitt & Chan, 1986).

While ACs and interviews attempt to measure job-specific demands that have been identified through job analysis (Society for Industrial and Organizational Psychology, 2003), personality inventories aim to measure individuals’ (self-rated) standing on job-relevant personality traits. In other words, the construct-related validity of personnel selection procedures is based on the premise that job-related knowledge, skills, abilities, and other personal characteristics (KSAOs) are assessed. Empirical results concerning the construct-related validity of both ACs and interviews, however, have been less promising (e.g., Huffcutt et al., 2001; Sackett & Dreher, 1982; Woehr & Arthur, 2003).

In comparison to ACs and structured interviews, personality inventories show a different pattern concerning their construct-related validity. In applicant (high-stakes) contexts, the factorial structure of these tests seems to change (e.g., Schmit & Ryan, 1993), indicating that the supposed construct-related validity is altered. In addition to the original personality-trait factors, an extra factor, sometimes termed an “ideal-employee-factor,” emerges in many studies (e.g., Cellar, Miller, Doverspike, & Klawsky, 1996; Ellingson, Sackett, & Hough, 1999; Schmit & Ryan, 1993).

These construct-related validity findings give rise to the question of what additional factors might contribute to the criterion-related validity of ACs, interviews, and personality inventories. Over the last decade, numerous variables (e.g., cognitive ability) relevant to the validity of selection procedures have already been identified (e.g., Bobko, Roth, & Potosky, 1999). However, a need for further research is implied by the ongoing search for the constructs actually being assessed in selection procedures, as well as by the research concerning moderators and mediators of the validity of selection procedures (Huffcutt et al., 2001; Huffcutt, Roth, & McDaniel, 1996; Macan, 2009; Morgeson et al., 2007; Sackett & Lievens, 2008; Salgado & Moscoso, 2002; Woehr & Arthur, 2003).

Taken together, research suggests that while we have ample empirical evidence for the
criterion-related validity of ACs, interviews, and personality inventories, we know considerably less about the mechanisms underlying that validity. If we understood better why these selection procedures are prognostically valid, we might be able to optimize them with less effort. We posit that ATIC might elucidate these validity issues.

Perceiving situations in personnel selection

Selection is an interactive situation in which people actively perceive and consider the situation before acting (e.g., Alexander & Knight, 1971). In times of insufficient supply of employment and widespread use of popular literature about personnel selection, applicants are not likely to behave passively in the selection procedure (Brown & Hesketh, 2004; Palmer, Campion, & Green, 1999). It is more plausible that applicants strive to enhance the probability of receiving a job offer. Expanding upon ideas from Orne (1962), Alexander and Knight (1971), and Bungard (1987), we postulate that ACs, interviews, and personality inventories should also be considered situations in which applicants actively strive for good evaluations. This striving leads applicants, as actors, to look for demand characteristics of the situation and choose their behavior accordingly (see Alexander & Knight, 1971; Alexander & Rudd, 1984). Therefore, applicants actively try to identify the criteria on which they are being evaluated to achieve a positive evaluation (see Tullar, 1989).

The difficulty of identifying demand characteristics in a given situation varies for applicants depending on the selection procedure. In part, this is because selection procedures differ in their degree of transparency about the targeted evaluation criteria. Whereas cognitive tests are evident in their purpose, other personnel selection procedures such as ACs, structured interviews, and personality inventories, depending on the exact instruction and procedure, inform the applicant to a much lesser extent about the dimensions being measured. Such selection situations are akin to so-called “weak” (ambiguous) situations than to “strong” situations (Mischel, 1973).

What is different for candidates if they take part in a transparent versus nontransparent selection procedure? A candidate participating in a relatively transparent selection procedure, (e.g., a cognitive ability test) can concentrate on performing adequately. A candidate participating in a nontransparent selection situation, however, is confronted by the additional challenge of identifying what is actually being measured. Thus, candidates in nontransparent (weak) selection procedures face two tasks. First, they have to identify what is being measured. Second, they have to demonstrate behavior in line with their assumptions of what is being measured. If candidates misread the situational cues, their performance might suffer.

The notion that a specific selection situation is perceived differently across candidates relates to Block and Block’s notion of psychological situations (1981). Block and Block (1981) distinguished between nominal and psychological situations. Nominal situations are situations that are perceived in the same manner by different individuals. If there is consensus about the situation (i.e., in nominal situations), people are supposed to act in line with this consensus by choosing the most appropriate action alternative (Alexander & Rudd, 1984). Therefore, candidates actively try to identify the criteria on which they are being evaluated to achieve a positive evaluation (see Tullar, 1989).

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interviews, or personality inventories can be considered psychological situations. This is because the perception of these situations may differ among candidates, and this variance could partly account for interindividual differences in candidates’ performance.

The relevance of individual differences in perceiving personnel selection situations correctly can be framed within the cognitive-affective personality system (CAPS) theory (Mischel & Shoda, 1995). This theory postulates, among other things, that features of a situation trigger affective and cognitive mental representations. Depending on the activated representation, certain behavioral scripts are prompted. For example, if Candidate A’s perception of the situation activates the cognitive representation of assertiveness (because Candidate A assumes that the AC exercise measures this dimension) the behavioral script being primed is that of assertiveness. If, however, Candidate B activates a cooperativeness script due to a different cognitive representation, a different behavior may follow. These differences in situational construal provide an explanation for the inter- and intraindividual variance of selection procedure performance.

Social effectiveness research also supports the argument that individual differences in perceptions play a role in performance in selection procedures as well as on the job, and that these differences might therefore contribute to the criterion-related validity. Social effectiveness is often considered to consist of a behavioral and a perceptive component (Ferris, Perrewe, & Douglas, 2002) and it seems to be associated with employees’ income and hierarchical position (e.g., political skills; see Ferris et al., 2008). Meta-analytic findings also revealed a moderate correlation between self-reported social effectiveness and overall AC performance (Hoeft & Schuler, 2001) and interview performance (Fox & Spector, 2000; Salgado & Moscoso, 2002). Furthermore, self-reported social effectiveness has emerged as a valid predictor of job performance (e.g., Bachman, Stein, Campbell, & Sitarenios, 2000; Hochwarter, Witt, Treadway, & Ferris, 2006; Jawahar, Meurs, Ferris, & Hochwarter, 2008).

**ATIC as a complementary explanation for criterion-related validity**

ATIC is defined as a person’s ability to correctly perceive performance criteria when participating in an evaluative situation. This definition emphasizes three aspects of the construct. First, it highlights the conceptualization of ATIC as an ability. Second, ATIC relates to perceptions in the actual evaluative situation (e.g., the AC) that might be influenced by information and cues gathered before and during the evaluative situation. In other words, a person’s assumptions about what is relevant in a situation are related to perceivable cues of that situation. In an AC exercise, for instance, several sources might serve as cues for what is required: exercise instructions, other participants’ behavior, reactions of raters, previous experiences in selection procedures, information gained through formal (books, test-coaching programs, etc.) and informal (fellow candidates, discussion forums, etc.) coaching, inspection of the job advertisement, and information about the company. Third, performance criteria are typically “consensually” determined by an organization and can thus be understood as nominal situations (Block & Block, 1981). However, these criteria are likely to vary between jobs and organizational cultures.

In line with the conceptual frameworks outlined in this chapter, we posit that candidates’ ability to identify performance criteria is relevant for their understanding of selection procedures (such as AC exercises, interview questions, or personality items), and therefore also for their behavior shown in these selection situations. As the outline of social effectiveness research has shown, individual differences in
self-reported social effectiveness are relevant for performance in selection procedures as well as on the job (e.g., Bachman et al., 2000; Hochwarter et al., 2006; Jawahar et al., 2008), and may thus contribute to the criterion-related validity of these selection procedures. The parallels between social perceptiveness and ATIC therefore underscore the potential relevance of ATIC for the criterion-related validity of selection procedures as well.

In contrast to social perceptiveness, which “reflects the ability to accurately interpret interpersonal dynamics (e.g., ‘read between the lines’ vs. interpret others’ comments literally’)” (Witt & Ferris, 2003, p. 811), ATIC specifically relates to the identification of performance criteria. We propose that people who score highly on this ability are able to show more dimension-relevant behavior and therefore achieve higher performance ratings in less transparent selection situations. Therefore, ATIC affects the measurement of targeted dimensions of ACs, interviews, and personality inventories. Due to the ambiguity of many work situations and the conceptual link to social effectiveness, we postulate that ATIC is relevant in selection procedures and on the job. Thus, variance in ATIC is assumed to be criterion-relevant variance. In the following, we will illustrate—based upon existing empirical results—that ATIC provides a complementary explanation for the criterion-related validity of ACs, structured interviews, and personality inventories.

ATIC: Empirical research evidence

In this section, we present and integrate a body of research on ATIC, illustrating the capacity of ATIC to shed light on candidates’ performance in selection procedures and on the validity of these procedures. As a starting point, we provide a brief description of the measurement of ATIC. Then, our discussion of the extant research concerning ATIC is structured according to research questions. First, we present research addressing interindividual variance in ATIC scores (Research Question 1) and the correlation of ATIC with performance in selection procedures (Research Question 2). Second, we review ATIC’s relation with cognitive ability (Research Question 3) and its broader nomological network (Research Question 4). Following this, we outline empirical findings concerning ATIC’s potential to predict job performance (Research Question 5). Finally, we describe research examining transparent selection procedures that make ATIC irrelevant. These concern the effect of making evaluation criteria transparent on candidates’ performance in a selection procedure (Research Question 6), on criterion-related validity (Research Question 7), and on the measurement of targeted dimensions (Research Question 8).

Measurement of ATIC

The first attempt to assess ATIC in selection procedures was developed by Kleinmann (1993). A unique feature of this method is that it is not a self-report inventory, but is instead conceptualized as an ability test. Thus, candidates can give correct or incorrect answers. Below, by way of example, we describe the most recent version of the ATIC measure for the AC (Jansen, Melchers, et al., 2010) that follows the approach by Kleinmann (1993) and König, Melchers, Kleinmann, Richter, and Klehe (2007). ATIC has been operationalized for structured interviews (cf. Melchers et al., 2009) and personality inventories (cf. König, Melchers, Kleinmann, Richter, & Klehe, 2006) in a similar manner.

After each AC exercise, candidates are asked to fill out a questionnaire to assess their assumptions about what has actually been rated in the AC exercise. They receive the following instruction:

In the previous exercise, you showed specific behaviors. Probably, you thought about what the assessors were assessing (i.e., on which
dimensions they rated your behavior). Please write down dimensions that you think have been assessed during the exercise. Please also note down behaviors related to these dimensions. (Jansen, Melchers, et al., 2010)

Following this, a neutral example with performance-irrelevant behavior in the AC is given. For instance, in an exercise measuring assertiveness, the dimension creativity is provided as an example and exemplary behaviors such as “coming up with innovative ideas,” “thinking outside the box” are listed. Candidates are allowed to write down as few or as many dimensions and behavioral examples per exercise as occurred to them in the situation.

After candidates complete the AC, trained raters (usually Master’s-level or doctoral students of work and organizational psychology) examine the questionnaires and rate the degree to which each of the candidate’s assumptions regarding assessed dimensions and behavioral examples in each exercise correspond to the consensually determined performance dimensions. These ratings are made on a scale from 0 = no fit to 3 = fits completely. If none of the assumptions are linked to a targeted dimension, a score of 0 is assigned. In the case of several assumptions being linked to the same dimension, the highest fit rating is used as the score (for a detailed description of the rating see the Appendix). The reliability of this coding procedure is satisfactory as indicated by good interrater reliabilities (e.g., intraclass correlation [ICC] = .86 in Jansen, Melchers, et al., 2010). To determine the final ATIC score, the ratings are averaged across dimensions and exercises. Thus, the ATIC score can range between 0 (low ability to identify the criteria) and 3 (excellent ability to identify criteria).

Research Question 1: Are there interindividual differences in candidates’ ATIC?

A necessary precondition for the potential impact of ATIC on performance in a selection procedure is that individuals must differ meaningfully with regard to their perception of situational cues. The body of research accumulated over the years indicates that they do. For instance, Kleinmann (1993) asked participants about the dimensions measured in five AC exercises (with four dimensions in each exercise). The total number of identifiable dimensions (20 overall) discerned in the AC varied considerably among individuals (Figure 1). This result was confirmed in several other studies (e.g., Kleinmann, 1997a; König et al., 2007; Melchers, Kleinmann, Richter, König, & Klehe, 2004; Preckel & Schüpbach, 2005). These findings demonstrate that individuals do indeed differ in the degree to which they read and identify the criteria for evaluation in a selection procedure. This is true for ACs (Kleinmann, 1993; Preckel & Schüpbach, 2005), structured interviews (Melchers et al., 2009), and personality inventories (König et al., 2006). Thus, the empirical evidence confirm that ATIC can be seen as an individual-differences variable.

Research Question 2: What are the effects of candidates’ ATIC on their performance in selection procedures?

Candidates’ correct identification of targeted dimensions should lead to stronger expression of behavior in line with these assumed dimensions, resulting in better performance and, ultimately, in better ratings in the selection procedure. Several studies support this latter assumption: If candidates are better at identifying the evaluation criteria, they receive higher ratings, as shown in Table 1. These correlations, ranging from .23 to .49, illustrate the positive relation between identifying targeted dimensions and performance in ACs, interviews, and personality inventories.

A corresponding idea is that intraindividual variance in recognizing relevant dimensions within one selection procedure might be related to intraindividual performance differences in that
specific selection procedure. In one study that supported this notion, AC participants received better ratings on dimensions that they had identified correctly than on dimensions that they failed to identify (Kleinmann, 1993). Similarly, as shown by a reanalysis of data from König et al. (2007), candidates who identified the intended dimension in an interview question performed better on this question than on questions for which they did not successfully identify the dimension.

**Research Question 3: How is ATIC related to cognitive ability?**

Although the aforementioned results hint at the relevance of ATIC, one might argue that this ability could represent a specific component of cognitive ability, because the identification of criteria is a cognitive construal. This appears even more plausible when one considers that cognitive ability correlates with performance in ACs (Collins et al., 2003; Hoeft & Schuler, 2001; Meriac, Hoffman, Woehr, & Fleisher, 2008), in interviews (Berry, Sackett, & Landers, 2007; Huffcutt et al., 1996), and on the job (Schmidt & Hunter, 1998). The relation between ATIC and cognitive ability should thus be put to the test.

Over the last decade, many ATIC studies have scrutinized the relation between ATIC and cognitive ability. Correlations range between .20 and .30 (Jansen, Melchers, et al., 2010; König et al., 2007; Melchers et al., 2009), suggesting that while ATIC and cognitive ability are conceptually similar, they are not empirically equivalent. However, in more than one study, ATIC explained incremental variance in selection procedure performance, beyond that explained by cognitive ability (König et al., 2007; Melchers et al., 2009). ATIC has also been shown to have incremental validity beyond cognitive ability in predicting job performance (Jansen, Melchers, et al., 2010).

An important question in this matter is whether ATIC serves as a mediator between

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**Table 1. Relation between the ability to identify criteria (ATIC) and performance in selection procedures**

<table>
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<tr>
<td><strong>Assessment center:</strong></td>
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<tr>
<td>Jansen, Melchers et al. (2010)</td>
<td>.23*</td>
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<td>Kleinmann (1993)</td>
<td>.30*</td>
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<td>Kleinmann (1997b)</td>
<td>.32**</td>
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<td>König et al. (2007)</td>
<td>.39**</td>
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<td>Preckel &amp; Schüpbach (2005)</td>
<td>.49**</td>
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<td><strong>Structured employment interview:</strong></td>
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<td>Melchers et al. (2004)</td>
<td>.27*</td>
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<td>Melchers et al. (2009)</td>
<td>.35**</td>
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<tr>
<td><strong>Personality inventory:</strong></td>
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<td>König et al. (2006)</td>
<td>.23*</td>
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Note: *p < .05, **p < .01.

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**Figure 1.** Interindividual differences in the number of identified dimensions (in the study of Kleinmann, 1993).
cognitive ability and performance in a selection procedure. In keeping with this possibility, Huffcutt et al. (1996) and Harris (1999) suggested that candidates with high cognitive ability might be better at thinking through questions to give more appropriate answers. If ATIC is an indicator of candidates’ ability to “think through questions,” it could link cognitive ability and performance in both ACs and interviews.

To evaluate this question, we reanalyzed data from the study by König et al. (2007) to test for mediation. The dataset from this study contained information on candidates’ cognitive ability, interview performance, AC performance, and measures of ATIC for the interview and the AC. For both the interview and the AC, we found a significant link between cognitive ability and performance in the selection procedure, a significant link between cognitive ability and ATIC, and a significant link between ATIC and performance. Finally, and most importantly, the link between cognitive ability and performance in the respective selection procedure was no longer significant once ATIC was included together with cognitive ability to predict performance in the final step. In addition, the Sobel test was significant for both selection procedures, meaning that the product of the links between intelligence and ATIC, and between ATIC and performance was also significant. Thus, there is empirical evidence that ATIC mediates the relation between cognitive ability and performance in both ACs and interviews.

**Research Question 4: What is the nomological network of ATIC?**

We consider ATIC to be a context-specific measurement of the more general ability to read relevant situational cues. As the “A” highlights, ATIC is conceptualized as an ability, and not as a trait. The aforementioned research shows that ATIC is conceptually related but empirically distinct from cognitive ability, and that ATIC correlates with performance on different selection procedures (König et al., 2007). Positive correlations (about .20) have been found (Schollaert & Lievens, 2008) between ATIC and a video-based test of social perceptiveness (Kleinmann, 1997b), suggesting that ATIC seems to have a similar conceptual overlap with social competence as with cognitive ability. Thus, we propose that the correct perception of performance criteria (i.e., ATIC) can be regarded as the cognitive component of social competence in selection situations.

One could also argue that self-monitoring, as one of the aspects of social effectiveness (Ferris et al., 2002) might also be related to ATIC. Self-monitoring is the extent to which individuals monitor, adjust, and control their behavior based on how this behavior is perceived by others (Snyder, 1974). However, two main differences should be noted between ATIC and self-monitoring. First, self-monitoring has a strong motivational component: It relates to “status-oriented impression management motives” (Gangestad & Snyder, 2000, p. 547), and high self-monitors are characterized by a high motivation to engage in behaviors that will help them to gain status and acceptance (Gangestad & Snyder, 2000). The second difference can be identified by looking at the measurement of the two constructs: Whereas self-monitoring is measured with broader self-report items relating to diverse situations, ATIC as a context-specific ability construct is measured by an ability-like test. These differences are reflected in the low correlation between ATIC and self-monitoring, \( r = .08 \), (Klehe et al., 2011) underscoring the empirical distinctness of the two constructs.

Political skill is another relevant social-effectiveness construct whose relation to ATIC should be considered. Political skill is defined as “the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one’s personal and/or organizational objectives” (Ahearn, Ferris, Hochwarter, Douglas, & Ammeter, 2004,
p. 311). According to Ferris et al. (2005), political skill consists of four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity. As expected due to the shared perceptiveness component of both constructs, research has demonstrated that political skill and ATIC in the AC are significantly related, with correlations ranging between $r = .20$ and $.25$ (Gschwend, 2010; Schollaert & Lievens, 2008).

Despite the common variance, three major differences between ATIC and political skill should be noted. First, apart from social astuteness, the political-skill dimensions relate to performance components of social effectiveness (e.g., the ability to exert influence), whereas ATIC solely focuses on perceptiveness. Second, ATIC relates specifically to the identification of targeted evaluation criteria. Social astuteness, however, refers to social interactions and the observation of others as a whole. Third, as mentioned above, unlike political skill, ATIC is assessed as an ability and not by a self-report measure.

**Research Question 5: Is ATIC relevant for the criterion-related validity of selection procedures?**

As argued at the outset, one of the most relevant practical research questions concerns ATIC’s impact on the criterion-related validity of selection procedures. If ATIC proves to be related to relevant criteria (e.g., performance on the job), the common variance might hint at the possible explanatory power of ATIC. Furthermore, if ATIC is, as we argued above, a cognitive component of social competence, it should play a role not only in personnel selection, but also in a managerial job context. Because managerial job demands are rarely stated explicitly, this context is typically characterized by ambiguity (Mintzberg, 2007). We therefore propose that ATIC is relevant in both personnel selection and job contexts, thus potentially contributing to the criterion-related validity of selection procedures. Figure 2 shows ATIC’s possible role for the criterion-related validity of selection procedures.

In past studies, the relation between ATIC and job performance was examined in different ways. Indirect tests were conducted examining whether ATIC scores measured for one selection procedure could predict performance in a second selection procedure, which then served as a proxy criterion of job performance (König et al., 2007). The results revealed a substantial correlation between ATIC in an interview and performance in an AC, $r = .34$, as well as between ATIC in the AC and performance in an interview, $r = .29$.

Results from a direct test (Jansen, Melchers, et al., 2010) examining the relation between ATIC, AC performance, and candidates’ job performance rated by their supervisors, illustrate that ATIC is positively related to job performance. In line with meta-analytic research on the criterion-related validity of ACs (Hermelin, Lievens, & Robertson, 2007), the correlation between AC performance and job performance in this study was significant, $r = .21$. Moreover, there was also a significant correlation between ATIC and job performance, $r = .27$. Additionally, ATIC accounted for significant amounts of incremental variance over and above cognitive ability in predicting job performance, $\Delta R^2 = .05$, which stresses the impact of ATIC on the prediction of job performance. The correlation between AC performance and job performance decreased and was no longer significant after controlling for ATIC.

Finally, the relation between ATIC and job performance has also been examined in the context of personality inventories. Candidates often distort their responses to personality inventories in selection contexts, resulting in what is called an “ideal employee factor” (e.g., Schmit & Ryan, 1993) underlying ratings of theoretically unrelated constructs. Despite this, personality measures largely sustain their criterion-related validity in high-stakes selection contexts. A study by Klehe et al. (2011)
supported the notion that ATIC accounted for the shared variance of the ideal-employee factor and performance in selection procedures (in an AC as well as in an interview), even after controlling for the impact of self-monitoring and cognitive ability.

Taken together, these results illustrate that ATIC contributes to selection procedure performance and to job performance. Moreover, ATIC possesses incremental validity over and above cognitive ability. Thus, as we suggested in the introduction, ATIC has the potential to account for variance in performance on the predictor and the criterion sides of selection procedures, thereby providing an additional answer to the question of why these selection procedures are prognostically valid.

**Research Question 6: Do candidates perform better in selection procedures with transparent dimensions?**

Above, we argued that ATIC might be of lesser importance in transparent selection situations because candidates can focus on performing without the need to think about the evaluation criteria. There is some empirical evidence for this assumed transparency effect on performance. Transparency was manipulated in an AC study (Kleinmann, Kuptsch, & Köller, 1996) as well as in an interview study (Klehe, König, Richter, Kleinmann, & Melcher, 2008) in order to determine its effect on performance. For instance, Klehe et al. (2008, Study 2) found a significant effect of the transparency manipulation on interview performance (cf. Figure 3). Other researchers have found similar results for ACs (Kleinmann et al., 1996; Smith-Jentsch, 2007, Study 1).

In contrast to these findings, other studies have failed to find significant differences in performance in transparent versus non-transparent ACs (Kolk, Born, & van der Flier, 2003; Schulze Versmar, Thomas, & Kersting, 2007; Smith-Jentsch, 2007, Study 2; Strobel, Lerche, Hoppe, & Bolte, 2006). Two factors might have contributed to these differing results. First, the strength of transparency manipulations may play a role. For example, the effect of transparency on performance was smaller in Klehe et al.’s (2008) Study 1 (which used a weaker transparency manipulation by providing relatively general information before the entire interview) than the effect in Study 2 (in which the targeted dimension was directly stated before each question). A look at the manipulation of the studies with nonsignificant findings (e.g., Kolk et al., 2003) suggests that the transparency manipulation was likely not as powerful as in Klehe et al.’s (2008) Study 2, which might
account for the lack of a transparency effect on selection score performance. Second, the contrasting findings in studies of the transparency effect on performance might be explained by the limited statistical power caused by relatively small samples in studies failing to find this effect ($N = 101$, Schulze Versmar et al., 2007; $N = 60$, Smith-Jentsch, 2007, Study 2; $N = 60$, Strobel et al., 2006).

Research Question 7: What are the effects of making the dimensions transparent to candidates on criterion-related validity?

In the previous sections, we postulated that individual differences in perceiving the evaluative situation might account for variance in performance both in selection procedures and on the job, thereby offering a complementary explanation for criterion-related validity of selection procedures. If this is true, then making dimensions transparent might reduce the variance caused by ATIC. This in turn might diminish criterion-related validity of the selection procedure: If the predictor no longer contains variance related to ATIC, ATIC can no longer account for variance in the criterion. Put simply, making dimensions transparent might reduce criterion-relevant variance in the predictor.

There is empirical support for this line of reasoning from studies in which the transparency of the predictor was manipulated and the effects on the criterion were observed (Kleinmann, 1997b; Smith-Jentsch, Salas, & Brannick, 2001). In one study, candidates’ performance in a transparent AC predicted their performance in a second (nontransparent) AC (serving as a proxy criterion) to a significantly lesser extent than did candidates’ performance in a nontransparent AC; $r = .34$ in the former case vs. $r = .62$ in the latter (Kleinmann, 1997b). In a second study involving flight simulation (Smith-Jentsch et al., 2001), ratings of directiveness in the simulation and subsequent self-reported directiveness in the cockpit one year later were significantly more
strongly correlated for those in the non-transparent condition than for those in the transparent condition ($r = .43$ vs. $r = -.02$).

Finally, results from Klehe et al.’s interview study (2008, Study 2) also revealed differences (albeit nonsignificant) between the criterion-related validity of transparent versus nontransparent interviews for predicting performance in a set of work simulations (a proxy criterion), with the nontransparent interviews demonstrating stronger criterion-related validity. Taken together, these studies suggest reduced criterion-related validity under conditions that make the targeted evaluation criteria very explicit. They also provide further evidence for the potential contribution of ATIC to the criterion-related validity of personnel selection procedures.

Research Question 8: Is it possible to improve the measurement of targeted dimensions by making the dimensions transparent to candidates?

It has been found that AC and interview performance improves when participants are able to correctly identify the performance criteria. Consequently, making dimensions transparent should enable all candidates (not just those high in ATIC) to show more evaluation-relevant behavior because interindividual differences in ATIC would no longer influence the performance measurement. This should improve the measurement of targeted dimensions.

Several studies have investigated whether transparency improves the measurement of targeted dimensions of both ACs (Kleinmann, 1997b; Kleinmann et al., 1996; Kolk et al., 2003) and structured interviews (Klehe et al., 2008). For example, Klehe et al. (2008, Study 2) used confirmatory factor analysis to investigate the construct-related validity of the targeted dimensions of an interview and found that a model that included dimension factors fit the data of the transparent interview well, but did not fit the data of the nontransparent interview. Similar results have also been found for ACs (Kleinmann et al., 1996; Kolk et al., 2003, Study 2).

However, these results stand in contrast to studies that failed to find an improvement of construct-related validity of the targeted dimensions under transparency conditions (Klehe et al., 2008, Study 1; Kolk et al., 2003, Study 1; Strobel et al., 2006). Nevertheless, it might again be the case that these differences arose due to the weaker transparency manipulation used in the latter studies, which would be supported by the effect of differing manipulations in the study of Klehe et al. (2008).

Summary of the empirical research evidence

Having started from the potential benefit of further explanations for the criterion-related and construct-related validity issues of selection procedures, we have reviewed an extensive body of research on ATIC, illustrating its capacity to shed light on selection procedure performance and validity. The crucial findings of this research are as follows: first, that the correct perception of evaluation criteria is related to performance in different personnel selection procedures; second, that even though ATIC is conceptually related to cognitive ability and social competence, they are nevertheless empirically distinct; and third, that ATIC contributes to the criterion-related validity of personal selection procedures. Furthermore, the transparency of targeted dimensions seems to improve both candidates’ performance and the measurement of targeted dimensions of selection procedures. However, transparency seems to decrease criterion-related validity. Taking these results into account, ATIC fulfills the requirements to serve as a complementary explanation for personnel selection procedure performance and validity.
Directions for future research

Notwithstanding the progress that research on ATIC has made so far, there remain several important questions that should be examined in the future. The remainder of this article discusses two key avenues for future research. One relates to the development of broader models of ATIC. The other relates to the practical utility of ATIC in human resource practice.

The role of ATIC in broader models of selection procedures and job performance

We highly recommend that future research studies the role of ATIC in broader models of test performance. Examples of such comprehensive validation approaches include the mediating role of ATIC in the relation between cognitive ability and interview performance or between the ideal-employee factor and personality inventory performance. More studies are required that examine the role of ATIC within networks of several potentially interesting variables (e.g., job knowledge, selection experience) in explaining selection procedure performance.

In a related vein, we recommend that further research examines the role of ATIC in the relation between personality and job performance. Differences in ATIC may moderate the relation between personality and performance. Following the ideas of the CAPS theory (Mischel, 1973; Mischel & Shoda, 1995), imagine, for example, that two candidates score identically high on the same trait (e.g., agreeableness). If Candidate A scores higher on ATIC than Candidate B, despite their being equally agreeable, different behavioral scripts are activated leading to different selection performance outcomes on related behavioral dimensions. In other words, candidates who score highly on evaluated traits and who identify the situational demands correctly should receive higher ratings on related performance dimension than candidates who also score highly on these traits but who do not correctly identify the situational demands. In contrast, the identification of performance criteria should not significantly affect the performance criteria of people scoring low on the trait because their maximum performance score is limited by their lower trait score. Initial evidence for a moderator effect of ATIC was found in an AC study (Jansen, Lievens, & Kleinmann, in press), but further research is needed that examines the role of ATIC in actual work situations.

The practical usefulness of ATIC

From an applied perspective, it would be beneficial for future studies to examine whether ATIC can be employed for making selection decisions. In all of the ATIC studies that have been conducted so far, participants were informed that the assessment of ATIC would not be taken as a performance indicator. We illustrated ATIC’s impact on selection procedures under these low-stakes conditions.

It might be argued, however, that ATIC does not really matter under these conditions as it is only measured for research purposes. A key question is what would happen if ATIC were to be measured as a performance indicator. If participants were told that the employer will use their ATIC score for making selection decisions, would the impact of ATIC under high-stakes conditions be similar to or different from the aforementioned results? Our expectation is that candidates would not be able to provide better readings of situational cues under high-stakes conditions, as it is difficult to fake an ability test (the candidate either knows the answer or not). However, future studies would do well to investigate the degree to which a high-stakes context might alter the impact of ATIC on performance.

A second practical and important issue for future research to consider is the trainability of ATIC. If we assume that ATIC is trainable, what would be the best approach? For
instance, do people need feedback regarding their accuracy in reading situations or does experiencing selection procedures help to improve ATIC? Perceptiveness training that focuses on improving people’s situational perceptiveness and interpretation, comparable to elements of cultural trainings (e.g., Littrell, Salas, Hess, Paley, & Riedel, 2006), could potentially be effective. Training could include such components as identifying cues in job advertisements, and studying instructions of AC exercises and interviews. Following this, trainees could be provided with feedback concerning the targeted dimensions and relevant cues. Measuring the effect of the training could provide answers to the trainability of ATIC and its impact on selection procedure scores.

Conclusions

While acknowledging other explanations for the validity of personnel selection procedures, this article aimed to shed further light on the validity of ACs, interviews, and personality inventories by presenting research concerning candidates’ assumptions and cognitions about what these selection procedures actually measure. It was argued and illustrated that the ability to identify evaluation criteria within selection procedures (i.e., the AC, interview, or personality inventories) is an important, albeit often ignored, factor that influences performance in these selection procedures as well as in subsequent performance situations on the job. Hence, ATIC may provide a complementary explanation as to why these procedures work, and thus account for their criterion-related validity. On the whole, there is strong support for the legitimacy of ATIC’s relevance for personnel selection validity research. ATIC appears to be an economical and therefore appealing complementary explanation because it simultaneously sheds light on the validity of several selection procedures. Overall, future research on ATIC will be beneficial in contributing to a better understanding of personnel selection issues.

Appendix

Description of the rating procedure of ATIC

The following example should illustrate the rating procedure. Let us suppose a group discussion was designed to assess four dimensions, namely organizing, consideration of others, analytical skills, and persuasiveness. A candidate wrote down the following assumptions and behavioral examples in the questionnaire following the group discussion: (a) “Willingness to compromise: not stubbornly persist with one’s point of view,” (b) “Leadership: to take initiative, to structure the discussion, to integrate opinions, to help the group to find a consensus,” (c) “Assertiveness: to argue conclusively, to persuade the others of the importance of one’s points” and (d) “Appearance: to be authentic and professional.”

Later, external raters rated the strength of fit on the 4-point scale between the first assumption (a) as 3 for the correspondence with the dimension consideration of others and as 0 for the dimensions organizing, analytical skills, and persuasiveness. Assumption (b) was rated as 2 for the correspondence with the dimension organizing, as 2 for the dimension consideration of others, and as 0 for the dimensions persuasiveness and analytical skills. Assumption (c) was rated as 3 for the correspondence with the dimension persuasiveness and as 0 for all other dimensions. Assumption (d) did not correspond to any dimension and was rated as 0 on all dimensions. Accordingly, the values 2 for organizing, 3 for consideration of others, 3 for persuasiveness and 0 for analytical skills were considered for the calculation of the ATIC score. As two dimensions were linked to the consideration of others’ dimension, the higher strength of fit rating was used. The ratings were averaged to compute the ATIC score.

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Notes
1. Please note that ATIC is an acronym and should therefore be pronounced as a single word.
2. Please note that this is the case when within-exercise ratings and interview item ratings are examined.

References


Kleinmann, M. (1997b). *Transparenz der Anforderungsdimensionen: Ein Moderator der Konstrukt- und Kriteriumsvalidität* [Transparency of the...


Schulze Versmar, K., Thomas, E., & Kersting, M. (2007). Wissen, was gefordert wird [Knowing the demands]. *PersonalMagazin, 8*, 20–22.


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