

HONEST AND DECEPTIVE IMPRESSION MANAGEMENT IN THE EMPLOYMENT INTERVIEW: CAN IT BE DETECTED AND HOW DOES IT IMPACT EVALUATIONS?

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Applicants use honest and deceptive impression management (IM) in employment interviews. Deceptive IM is especially problematic because it can lead organizations to hire less competent but deceptive applicants if interviewers are not able to identify the deception. We investigated interviewers' capacity to detect IM in 5 experimental studies using real-time video coding of IM ($N = 246$ professional interviewers and 270 novice interviewers). Interviewers' attempts to detect applicants' IM were often unsuccessful. Interviewers were better at detecting honest than deceptive IM. Interview question type affected IM detection, but interviewers' experience did not. Finally, interviewers' perceptions of IM use by applicants were related to their evaluations of applicants' performance in the interview. Interviewers' attempts to adjust their evaluations of applicants they perceive to use deceptive IM may fail because they cannot correctly identify when applicants actually engage in various IM tactics. Helping interviewers to better identify deceptive IM tactics used by applicants may increase the validity of employment interviews.

Impression management (IM), or applicants' attempts to create a particular image in interviewers' minds during employment interviews, has received attention from personnel selection researchers in the past decades (Barrick, Shaffer, & DeGrassi, 2009; Ellis, West, Ryan, & DeShon, 2002; Kristof-Brown, Barrick, & Franke, 2002; Stevens & Kristof, 1995). Research has shown that nearly all job applicants engage in IM (Ellis et al., 2002; Levashina & Campion, 2007; Turnley & Bolino, 2001), but they

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engage in different types of IM tactics depending on the type of interview question used (Ellis et al., 2002; McFarland, Ryan, & Kriska, 2003; Van Iddekinge, McFarland, & Raymark, 2007). For instance, applicants use more self-focused IM when asked past-behavior questions but more other-focused IM when asked situational questions (Levashina et al., 2014). In addition, applicant use of IM has been related to higher ratings of interview performance (Kacmar, Delery, & Ferris, 1992; Kristof-Brown et al., 2002; Van Iddekinge, Raymark, & Roth, 2005). Moreover, applicants can engage in honest IM to truthfully describe their actual job-related abilities, accomplishments, and experiences. Alternatively, they can use deceptive IM or faking to embellish their job-related credentials or to create credentials that fit with the job requirements (Gilmore & Ferris, 1989; Levashina & Campion, 2007).

Yet, whether applicant IM, and especially deceptive IM, is an issue for the selection process is still debated. On the one hand, identifying deceptive IM is of prime concern for interviewers and organizations (Arthur, Glaze, Villado, & Taylor, 2010; Vrij, Granhag, & Porter, 2010). Some researchers suggest that applicants' use of deceptive IM may attenuate interview validity (Delery & Kacmar, 1998; Gilmore, Stevens, Harrell-Cook, & Ferris, 1999; Levashina & Campion, 2006; Marcus, 2006). Barrick et al.'s (2009) meta-analysis shows that applicants' use of IM is strongly related to interviewers' ratings of interview performance but that the relationship between IM use and job performance is weaker. Unfortunately, they did not distinguish between the impact of honest and deceptive IM on interview performance or job performance. On the other hand, research in personality testing suggests that IM or faking does not seriously attenuate the validity of selection instruments (Barrick & Mount, 1996; Ones & Viswesvaran, 1998), although faking can influence the ranking of applicants and, thus, hiring decisions (Stewart, Darnold, Zimmerman, Parks, & Dustin, 2010; Weiss & Feldman, 2006).

If applicants who use IM receive better ratings in interviews but do not perform better at work, organizations may run the risk of overlooking highly qualified applicants while hiring less qualified ones. Logically, a solution for organizations would be to make sure that interviewers are able to detect when applicants use IM tactics and identify fakers. Then interviewers should probably use this information in their evaluations and give lower evaluations to applicants who use deception or eliminate them (Rosenfeld, 1997). Some authors have suggested that detection of deceptive tactics used by applicants may be possible if interviewers use appropriate cues of deception, such as speech disturbances or response latencies (Van Iddekinge et al., 2005), or are sensitized to IM tactics (Fletcher, 1990). Interviewers themselves believe they can detect deceptive IM (Robie, Tuzinski, & Bly, 2006). Yet, no empirical study has tested

interviewers' actual ability to do so. Thus, the extent to which applicant IM represents a problem for the employment interview remains unclear, and empirical research examining this issue has been scarce, despite numerous calls (Levashina & Campion, 2006, 2007; Levashina et al., 2014; Macan, 2009; Posthuma, Morgeson, & Campion, 2002).

This research aims to fill this gap by investigating (a) interviewers' ability to detect IM tactics during employment interviews, (b) some boundary conditions to IM detection, and (c) the effects of perceived IM on interviewers' evaluations of applicants.

The main contribution of this research is the examination of whether interviewers are able to detect honest and deceptive IM used by applicants. Previous studies have investigated applicants' self-reported use of various IM types (e.g., Kristof-Brown et al., 2002; Levashina & Campion, 2007; Swider, Barrick, Harris, & Stoverink, 2011), but none of those studies directly examined IM detection by interviewers. We present a novel experimental design using real-time video coding allowing us to (a) examine interviewers' overall ability to detect applicant IM, (b) test whether interviewers can detect IM at better than chance level, and (c) test whether it is easier to detect honest or deceptive IM.

This research has also several secondary contributions. First, we examine whether interview question types, such as past-behavior and situational questions, influence interviewers' ability to detect IM. Past research has shown that interview question type may affect IM use (Ellis et al., 2002; Levashina & Campion, 2007; Van Iddekinge et al., 2007). Yet, it remains unclear if question type influences IM detection by interviewers. Our research therefore compares IM detection in past-behavior questions with IM detection in situational questions, providing organizations with potentially useful insights on how to choose the best interview question type to improve IM detection by interviewers.

Second, we examine whether experienced interviewers outperform less experienced interviewers at IM detection. Interviewers who are more experienced in conducting interviews may have accumulated knowledge about applicants' IM tactics and developed strategies to detect them. Indeed, research on deception detection has identified strategies (e.g., focusing on story-related rather than nonverbal cues; Mann, Vrij, & Bull, 2004) leading to better detection. However, experience does not lead to more accurate deception detection (DePaulo & Pfeifer, 1986), and evidence of individual differences leading to better deception detection is scarce (Bond & DePaulo, 2008).

Third, we examine the impact of IM as perceived by interviewers on their evaluations of applicants. Barrick et al. (2009, p. 1404) suggested that "interviewer reactions to self-presentation tactics may be the most useful indicator of their impact on subsequent ratings of candidate

performance during the interview.” Yet, previous studies have conflated measures of IM from different sources, including applicant self-reports, coding by observers, and interviewers’ ratings. Further, past research has mainly focused on applicant IM use and its relationship with interviewers’ evaluations (Gilmore & Ferris, 1989; Kristof-Brown et al., 2002; Levashina & Campion, 2007; Swider et al., 2011; Van Iddekinge et al., 2005), overlooking interviewers’ perceptions of IM (for exceptions, see Roulin, Bangerter, & Levashina, 2014; Stevens & Kristof, 1995). Moreover, applicants’ use of deceptive IM in interviews sometimes increases their chances to get a job (Levashina & Campion, 2007) and sometimes does not (Swider et al., 2011). We propose that such inconsistencies could be explained by interviewers’ success at detecting such tactics and adjust their evaluations accordingly. As such, perceived IM by the interviewers may impact their ratings of applicants to a greater extent than the actual IM use by the applicants.

IM in Employment Interviews

Applicants can use different types of honest IM tactics in interviews (Stevens & Kristof, 1995). They may use nonverbal tactics, such as smiling or frequent eye contact, and also verbal tactics, such as assertive and defensive tactics (Bolino, Kacmar, Turnley, & Gilstrap, 2008). Assertive verbal tactics are used to proactively construct images of being good job applicants. They include self-focused tactics like honest self-promotion (i.e., demonstrating responsibility for positive results in the past or enhancing one’s competence) and also other-focused tactics such as honest ingratiation (i.e., evoking interpersonal attraction or liking with the interviewer) and opinion conformity (i.e., endorsing attitudes & values held by the interviewer). Defensive IM tactics are used to repair negative images of applicants and include apologies, excuses, and justifications (Tsai, Huang, Wu, & Lo, 2010).

Alternatively, applicants may use deceptive IM tactics to resemble the profile of the ideal applicant (Leary & Kowalski, 1990; Levashina & Campion, 2006). For instance, applicants may use self-focused tactics such as slight image creation (i.e., embellishing, tailoring, and fit enhancing) or extensive image creation (i.e., constructing, inventing, and borrowing experiences or accomplishments), other-focused tactics such as deceptive ingratiation (i.e., expressing insincere beliefs or values that are held by the interviewer or the organization), but also defensive tactics such as image protection (i.e., omitting or masking negative experiences; Levashina & Campion, 2007). Although not all forms of deceptive IM can be considered as lying, extensive image creation tactics are semantically close to lying.

Researchers have used different approaches to measure IM. Many have used questionnaires asking applicants to report IM use right after their interview (Kristof-Brown et al., 2002; Levashina & Campion, 2007; Swider et al., 2011; Tsai, Chen, & Chiu, 2005) or thinking about their last interview (König, Hafsteinsson, Jansen, & Stadelmann, 2011). A few studies have also asked interviewers' to rate the IM tactics used by applicants (Roulin et al., 2014; Stevens & Kristof, 1995). Others studies have recorded interviews and then asked trained coders to code IM based on video or audio recordings (Ellis et al., 2002; McFarland, Yun, Harold, Viera, & Moore, 2005; Van Iddekinge et al., 2007) or interview transcripts (Stevens & Kristof, 1995). Each approach has its strengths and weaknesses. For instance, using coders reduces the risks of socially desirable responding associated with self-reported IM. Yet, it is not possible to use coders to measure deceptive IM because only applicants themselves know when they have been honest or deceptive in their responses. The same problem may exist with interviewers' perceptions, especially when applicants use IM effectively (Kristof-Brown et al., 2002). There is low to moderate convergence of ratings obtained with these alternative approaches. For instance, Stevens and Kristof (1995) reported low to moderate correlations between applicant self-reports of IM (using a questionnaire) and external coding by trained coders based on transcripts of interviews (r s ranging from $-.23$ to $.34$) but higher correlations between applicant self-reports and observers asked to complete the same questionnaire after listening to an audiotape of the interview (r s ranging from $.50$ to $.68$).

Interviewers' Ability to Detect IM

We know of only two field studies that have explored IM detection by examining interviewers' perceptions of applicant IM use and comparing them to applicants' reported IM use (Roulin et al., 2014; Stevens & Kristof, 1995). Both studies found nonsignificant low to moderate convergence. Roulin et al. reported correlations between interviewers' perception of IM and applicants' self-reported use ranging from $-.11$ to $.14$ across five types of IM tactics. Stevens and Kristof reported correlations ranging from $-.09$ to $.29$ for four types of IM tactics.

Both studies measured overall interviewers' IM perceptions at the end of the interview, ignoring detection of specific tactics at specific times during the interview. This approach is likely to lead to contaminated measures of convergence. For instance, applicants and interviewers may converge in the (perceived) use of a specific image creation tactic to a considerable extent during the interview. But the applicant may be referring to a tactic used after 3 minutes when he/she was exaggerating

his/her leadership skills, while the interviewer may be referring to his/her perception of an exaggerated answer about programming skills after 15 minutes into the interview.

Some researchers have also examined IM detection using lab experiments. For instance, in a recent study, interviewers watched 1-minute statements from applicants and classified them as truths or lies. Interviewers were correct 52.4% of the time (Reinhard, Scharmach, & Müller, 2013), which is only slightly above chance (i.e., 50%). But applicants' statements consisted of short descriptions of real and invented work experiences and not responses to interview questions. Nevertheless, this finding corresponds to the typical detection rate found in deception detection research. For instance, Bond and DePaulo's (2006) meta-analysis reported an average of 54% of correct lie-truth judgments across 206 studies. Overall, then, we expect interviewers to be relatively inaccurate in their detection of IM. We will evaluate interviewers' ability to detect IM in multiple experiments, and we propose to explore this issue with the following research question:

Research Question 1: Can interviewers detect IM tactics used by applicants in interviews?

Using Interpersonal Deception Theory to Examine Honest and Deceptive IM Detection

Even if detecting IM is a difficult task for interviewers, there may be potential differences in detection of honest and deceptive IM. Interviewers' attempts to detect honest and deceptive IM tactics can be examined along the lines of interpersonal deception theory (IDT; Buller & Burgoon, 1996) and, more generally, research on truth versus deception detection. IDT allows examining the dynamic exchange of honest and deceptive messages between a sender and a receiver in interpersonal interactions. According to IDT, when receivers receive messages from senders, receivers first assess if the messages are truthful or deceptive. Receivers assess truthfulness based on their knowledge about senders, the information that is transmitted, and their level of suspicion in case of uncertainty. Then receivers use this initial assessment to evaluate the quality of the message, interpret its content, and ultimately evaluate the sender. Although we do not test specific propositions of Buller and Burgoon (1996), we use IDT as a framework for understanding interviewers' attempts to detect and interpret applicant IM. IDT predicts that it is more complex for receivers to accurately detect deceptive than truthful messages. IDT would thus suggest that in employment interviews, it is more difficult for

interviewers to accurately detect applicants' use of deceptive IM tactics than applicants' use of honest IM. This could be due to several reasons.

First, detecting deception requires more cognitive resources than detecting truthful messages (Buller & Burgoon, 1996) and is especially difficult when simultaneously conducting interpersonal interactions involving cognitive effort, like an interview (Buller & Burgoon, 1996; Nordstrom, Hall, & Bartels, 1998). Interviewers need to detect potential cues of deception while asking questions, taking notes, and processing and evaluating applicants' responses. Moreover, people are better truth detectors than deception detectors (Bond & DePaulo, 2006; Levine, Park, & McCornack, 1999). For instance, Levine et al. (1999) examined the proportion of correct detection of truthful and deceptive messages separately and found that truths (mean correct detection = 79% across the three studies) were better detected than lies (mean correct detection = 34% across the three studies). IDT would thus suggest that interviewers are more likely to correctly identify honest IM than to correctly identify deceptive IM. Yet, IM detection in employment interviews is more complex than traditional deception detection tasks that involve making binary judgments (truth or lie). In real interview situations, interviewers need to consider if the applicant is using deceptive IM, honest IM, or no IM at all at any point in time during the interview. Therefore, when interviewers perceive applicants as being honest, they still need to estimate if they are using honest IM or no IM.

Second, IDT proposes that receivers generally believe that senders are telling the truth because they expect others to be pleasant and trustworthy (Buller & Burgoon, 1996). This truth bias is also the simplest heuristic to use under high cognitive load (Millar & Millar, 1997). The truth bias has been documented in several deception detection studies (e.g., Granhag & Strömwall, 2001; Levine & McCornack, 2001). As such, interviewers are likely to incorrectly identify deceptive IM as honest IM.

Third, IDT suggests that receivers often employ information processing strategies that are counterproductive for deception detection, such as focusing on the wrong cues (Buller & Burgoon, 1996). Indeed, cues to deception are often hardly discernible (DePaulo et al., 2003), and people (even experts) often tend to interpret the wrong nonverbal behaviors as cues of deception, such as nervousness or facial cues (Vrij et al., 2010). This is especially true when people have a limited shared history (Buller & Burgoon, 1996) like in an employment interview. Alternatively, focusing on the appropriate cues of deception, such as cues in discourse instead of nonverbal behavior, leads to better detection (Mann et al., 2004). As such, interviewers are likely to focus on incorrect cues of deception, preventing them from accurately detecting deceptive IM.

Overall, we thus expect that honest IM is more accurately detected (i.e., a higher proportion of correct detection) than deceptive IM.

Hypothesis 1: Detection of honest IM tactics is more accurate than detection of deceptive IM tactics.

Interview Question Type, Interviewer Experience, and IM Detection

Interview question type. The two main types of structured interview questions are past-behavior and situational questions (Campion, Palmer, & Campion, 1997). Past-behavior questions ask applicants to describe how they behaved in past job-related situations (Janz, 1982; Motowidlo et al., 1992), whereas situational questions ask applicants to describe how they would behave in hypothetical job-related situations (Latham, Saari, Pursell, & Campion, 1980; Latham & Sue-Chan, 1999). The type of IM tactics used by applicants is influenced by question type (Levashina et al., in press). Self-focused and defensive IM tactics are used more with past-behavior interviews, whereas other-focused IM tactics are used more in situational interviews (Ellis et al., 2002; Van Iddekinge et al., 2007). Deceptive IM tactics are used more in situational interviews than past-behavior interviews because of their hypothetical and less verifiable nature (Levashina & Campion, 2006, 2007). It is also likely that question type influences IM detection.

First, situational questions may lead to more accurate IM detection than past-behavior questions because the nature of such questions may make interviewers more vigilant or suspicious toward applicant IM and the veracity of their responses. IDT (Buller & Burgoon, 1996) suggests that message receivers' suspicion may improve detection accuracy. Suspicion improves detection accuracy by reducing a truth bias that may threaten accurate detection of deceptive messages. Responses to situational questions are based on applicants' declarations of how they would behave if a hypothetical situation occurs, which are less verifiable than actual behaviors in the past that could be checked with previous employers. When answering situational questions, applicants may develop the "right" answer and describe or claim engaging in behaviors that fit the organizations' values or expectations (Krajewski, Goffin, McCarthy, Rothstein, & Johnston, 2006) or make a positive impression on the interviewer (Ellis et al., 2002). As such, situational questions may offer more opportunities to use IM tactics, and especially deceptive ones, than more verifiable past-behavior questions (Levashina & Campion, 2006, 2007). Interviewers may thus be more suspicious toward applicants' hypothetical answers, perceiving them as less credible than answers based on concrete past experiences.

Second, responses to situational questions may be shorter than responses to past-behavior questions, reducing interviewers' cognitive load and thus potentially improving IM detection. Indeed, IDT (Buller & Burgoon, 1996) suggests that message receivers are unable to decode and interpret all incoming information in social interactions like interviews. The more information they receive during the interaction, the more they have to be selective, potentially interfering with detection. In past-behavior interviews, answers to questions are ideally organized around a description of the situation, the task at hand, applicant's actions or behavior, and the results obtained (i.e., the STAR approach; Oliver, Bakker, Demerouti, & De Jong, 2005; Tross & Maurer, 2008). With situational questions, applicants do not need to describe the situation and task but rather start with their intended behavior and conclude with anticipated results. Applicants' answers are thus shorter, and less information is exchanged with the interviewer in situational interviews. Because interviewers have less information to process, situational questions may facilitate IM detection. Thus, we expect that IM will be more accurately detected (i.e., a higher proportion of correct detection) in situational than past-behavior interviews:

Hypothesis 2: Detection of both honest and deceptive IM tactics is more accurate in situational than in past-behavior interviews.

Interviewer experience. Logically, one might expect that more experienced interviewers should be more accurate in detecting applicant IM because they have conducted more interviews and may thus have learned to identify applicants' IM behaviors better over time. IDT (Buller & Burgoon, 1996) proposes that receivers are better at detecting deception if they have more experience with deception. General theories of experiential learning (Herriott, Levinthal, & March, 1985) also suggest that experience can improve performance. Yet, experts often tend to be overconfident in their judgments (Dunning, Heath, & Suls, 2004). In interviews, experienced interviewers may be overconfident about their ability to evaluate applicants (Delery & Kacmar, 1998) and accurately predict their future job performance (Dipboye, 1994). This overconfidence may lead interviewers to rely on their intuition (Highhouse, 2002, 2008) because they are convinced that they can easily evaluate applicants. Interviewers may therefore also be overconfident regarding their ability to correctly perceive applicants' IM behaviors (Ralston & Kirkwood, 1999) or deception (Robie et al., 2006).

Empirical evidence regarding the relationship between IM or deception detection and experience is also mixed. Experts are generally not better at detecting deception than novices (DePaulo & Pfeifer, 1986; Vrij et al.,

2010). Experience may improve deception detection for police officers, but only if specific experience in conducting interrogations is taken into account (Mann et al., 2004). Research on IM in interviews suggests that experienced and less experienced interviewers are equally influenced by IM behaviors (Lievens & Peeters, 2008; Tsai et al., 2010). More specifically, these studies showed that the relationship between applicant IM use and interviewers' evaluation of these applicants was similar for experienced and less experienced interviewers. Moreover, Reinhard et al. (2013) found no difference between professional interviewers' and students' deception detection accuracy. In light of the mixed evidence mentioned above, we propose to examine the relationship between IM detection accuracy and experience with the following research question:

Research Question 2: Is IM detection more accurate for experienced interviewers than inexperienced interviewers?

Perceived IM and Applicant Evaluation

Interviewers' perceptions of and reactions to IM tactics may affect their evaluations of applicants' performance in interviews (Barrick et al., 2009). IDT suggests that message receivers should experience more negative emotions and make more negative evaluations of the message senders when they perceive messages as being deceptive (Buller & Burgoon, 1996).

Interviewers expect applicants to use honest IM tactics in the interview (Ralston & Kirkwood, 1999). Honest IM such as self-promotion can be seen as signaling social competencies (Kristof-Brown et al., 2002), interest in the job (Bozeman & Kacmar, 1997), ability to present oneself in work-related interactions (Griffith, Peterson, Isaacson, Quist, & Gammon, 2009), or potentially higher job performance (Kleinmann & Klehe, 2010). In contrast, deceptive IM such as image protection and image creation can be seen as signaling arrogance or lack of integrity, lack of job-related competence or expertise, and intent to engage in deviant behavior if hired (Griffith & McDaniel, 2006; Griffith et al., 2009; Turnley & Bolino, 2001). A recent study (Roulin et al., 2014) reported positive relationships between interviewers' perceived self-promotion and evaluations of applicants but negative relationships between perceived slight image creation and evaluations. Therefore, we expect interviewers to evaluate more positively applicants they perceive to engage in honest IM tactics and to evaluate less positively those they perceive to engage in deceptive tactics.

Hypothesis 3: Interviewers' perceptions of (a) honest IM use are positively related to their evaluation of applicants, while

their perceptions of (b) defensive or (c) deceptive IM use are negatively related to their evaluation of applicants.

Study 1

Method

Sample. The sample comprised 154 professional interviewers working in 80 different organizations in Switzerland. A total of 48.7% of interviewers were female, the mean age was 41.2 years ($SD = 9.0$), and they possessed a mean of 9.6 years ($SD = 7.6$) of interviewing experience. Interviewers had conducted, on average, 692 interviews in their career ($SD = 1332$) and 22 interviews in the past 3 months ($SD = 53$). A majority (61.7%) held a university degree or equivalent. Professional interviewers were contacted by phone or email and invited to participate in a 30-minute study on employment interviews; 57% accepted to participate in the study. Upon acceptance, we arranged an appointment at their office, where data collection took place.

Materials and procedures. Three male students were hired to participate as applicants in a short video-recorded mock interview for a human resources assistant position. They answered a general question about how they had managed a conflict with a boss or a coworker in the past. Applicants were trained to respond like in a real employment interview, that is, to base their answers on their actual experiences and to try to make a good impression on the interviewer. Based on the level of detail of their answer, follow-up questions were asked using the STAR (situation–task–action–results) method (Oliver et al., 2005). To increase realism without making the applicant uncomfortable, the camera was positioned right behind the left shoulder of the interviewer (i.e., a view that resembles the actual view of the interviewer).

After their interviews, the first author of the study conducted an extensive session with each applicant, where applicants read a description of one type of honest IM, such as self-promotion, and three types of deceptive IM, such as deceptive ingratiation, image protection, and image creation. Applicants were provided with several illustrative examples of these tactics and had the opportunity to ask clarification questions. Then they watched the videos of their interviews and were asked to indicate the exact times when they used each type of IM tactics using Noldus Observer XT (2009), a video coding software package. Each type was associated with a specific key on the keyboard, and the software recorded the exact time associated with the use of each tactic. A visual example of coding with Noldus Observer can be found in Appendix A. Coding sessions were

supervised by the first author to ensure reliable coding from applicants. For instance, they had the opportunity to pause and rewind the videos if they thought they missed something or to ask questions if they were unsure about the coding. For each applicant, we recorded and coded several versions of the interview. After a discussion with each applicant and among the authors, we kept only the two videos for each applicant that contained the most realistic interviews that featured a variety of different IM tactics as well as more accurate applicants' ratings of their reported IM use across different IM tactics. Overall, applicants coded, on average, 5.7 honest IM tactics and 6 deceptive IM tactics during each interview.

Interviewers read the HR assistant job description and watched a video with two recorded interviews. Each interviewer was randomly assigned to one of six possible combinations of two interviews and thus watched about 10–12 minutes of interviews. We created these six combinations using the two interviews from each of our three applicants and counterbalancing the pairs and order of applicants. Interviewers were provided with the same definitions and examples of IM tactics as the applicants before watching the video-recorded interviews and coded the tactics exactly as the applicants did. Detection indicators were measured by comparing interviewers' coding to the applicants' coding. After each interview, interviewers completed a short evaluation form of the applicant. At the end of the experiment, they completed a demographic questionnaire.

Measures. We computed various detection indicators by comparing interviewers' coding of IM tactics with applicants' reported use of these tactics. Indicators were adapted from signal detection theory (e.g., Green & Swets, 1966). *Correct detections* include cases where the interviewers correctly coded the specific IM tactic the applicant reported using at that time. *Correct rejections* include cases where the interviewer did not code any tactic and the applicant did not use any IM tactic. *Misses* include cases where the interviewer failed to identify that the applicant used an IM tactic at that time. *False alarms* correspond to cases where the interviewer coded a tactic but the applicant did not report using any tactic at that time. Finally, *misattributions* include cases where the interviewer correctly identified that the applicant used IM at that time but incorrectly identified the type of tactic (e.g., coded *self-promotion* while the applicant was actually using *image creation*).

Applicants' and interviewers' coding of IM tactics were points in time. Yet, IM tactics correspond to durations (i.e., a statement that can last several seconds). Therefore, the point in time coded by the applicant may not exactly correspond to the start of the IM statement. Moreover, it may take time for interviewers to perceive the tactic and code it. Thus, we considered interviewers' coding located within a 10-second time window around applicants' coding (i.e., 5 seconds before and 5 seconds after) to be

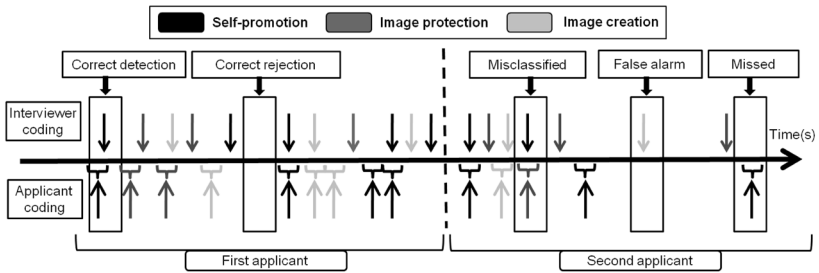


Figure 1: Illustration of Coding and Detection Indicators for Study 1.

simultaneous with applicants' coding. For instance, if the applicant reported *image protection* after 75 seconds of an interview, interviewers' coding of *image protection* anywhere between 70 and 80 seconds of interview were considered as *correct detections*. Other types of IM coded within this period, such as *self-promotion*, were qualified as *misattributions*. A graphical illustration can be found in Figure 1. Moreover, if interviewers coded several tactics in a period where the applicant only reported one, we kept only the most correct one. For instance, if an interviewer coded two tactics and one coding should have been classified as *correct detection* and the other as *misattribution*, we only kept *correct detection*.

Finally, in our experiment, signals (i.e., periods with various IM tactics) and noise (i.e., periods with no tactic) were presented to the interviewers in a continuous manner, and coding was done in real time. This is different from traditional signal detection studies where participants evaluate discrete trials (i.e., code signal or noise after being presented with a stimulus). We thus computed proportions for our IM detection indicators, such as proportion of *correct detections*, *misses*, and *misattributions*, instead of traditional signal detection indicators (e.g., Stanislaw & Todorov, 1999). The proportions of *correct detections*, *misses*, and *misattributions* were computed by dividing the number of cases coded by the interviewer (e.g., the number of correct detections) by the total number of IM tactics used by (i.e., coded by) the applicant. We also computed indicators of *correct detection* for honest and deceptive IM separately. The proportions of *correct rejections* and *false alarms* were computed by dividing the number of cases by the number of periods where the applicant did not report any IM. An example indicator calculation for one interviewer can be found in Appendix A. For testing hypotheses, we only used *correct detections* and *correct rejections* as our dependent variables.

We also computed the chance level and the difference between actual detection and chance level for all detection indicators, using the

“surrogate” method (Louwerse, Dale, Bard, & Jeuniaux, 2012). This approach involves creating pseudo-dyads (Hertel, Kerr, & Messé, 2000; Kenny, Kashy, & Cook, 2006; Roest, Dubas, Gerris, & Engels, 2009) by comparing IM coding of interviewers with the coding of a different applicant than the one they watched. For instance, if an interviewer watched the video of applicant A, we computed a chance level for IM detection by matching that interviewer’s IM coding for applicant A with the IM tactics reported by applicant B. The chance level detection indicator obtained using this method can then be compared to the actual detection level (i.e., computed with applicant A’s reported IM, as described earlier) to test if actual detection is better than chance (Table 1).

Perceived interview performance. Interviewers completed a five-item scale (where 1 = *completely disagree* and 5 = *completely agree*; $\alpha = .94$) measuring their perception of overall applicant performance in each interview. Items were similar to those used in previous interview research; sample items include.

“The applicant was able to convince me that he/she had the required abilities for the position,” “the applicant made a good impression on me,” “I would give a good evaluation to this applicant,” “the applicant would have moved to the next step in the selection process,” and “I would recommend this applicant for the position.”

Control variables. Interviewers’ interviewing experience, gender, age, and education level were included in our analyses as control variables (here and in the following studies) to avoid any confounding effects (e.g., between interviewing experience and age). Yet, results remain similar without these control variables.

Results

The means and standard deviations for all our detection indicators are presented in Table 1, allowing us to examine interviewers’ ability to detect IM (Research Question 1), and correlations among all study variables are presented in Table 2. Interviewers’ percentage of *correct detections* was low (13.2%), albeit significantly higher than chance level (7%, $t(154) = 8.20, p < .01, d = .58$). We tested Hypothesis 1 examining the difference in correct detection between honest and deceptive IM with an ANOVA. We found no difference, with 13.4% and 13.8% of *correct detections* for honest and deceptive IM, respectively, ($F[1, 153] = .08, p = .78$). Data from this first study do not support Hypothesis 1.

We tested Research Question 2 (i.e., the impact of interviewer experience on detection) with regression analyses using STATA 12 (2011) (Table 3). Question type was not manipulated in Study 1, and thus Hypothesis 2 is not tested here. We conducted separate regressions with the

TABLE 1
*Means, Standard Deviations, and Differences for Actual IM Detection Versus
 Chance Level, Studies 1–4*

	Indicator	Actual detection	Chance level	<i>t</i> -test	Cohen's <i>d</i>
Study 1— Recruiters	Correct detection— Honest	.13 (.12)	.08 (.08)	$t(154) = 6.29,$ $p < .01$	.49
	Correct detection— Deceptive	.14 (.15)	.07 (.11)	$t(154) = 5.00,$ $p < .01$	.53
	Correct detection— Overall	.13 (.09)	.07 (.06)	$t(154) = 8.20,$ $p < .01$	.78
	Misattributions	.14 (.10)	.15 (.09)	$t(154) = 1.25,$ $p = .21$	.11
	Miss	.73 (.14)	.77 (.11)	$t(154) = 6.18,$ $p < .01$	.32
	Correct rejection	.82 (.13)	.75 (.15)	$t(154) = 5.44,$ $p < .01$	.43
	False alarms	.17 (.12)	.25 (.15)	$t(154) = 6.98,$ $p < .01$	.59
	Study 2— Recruiters	Correct detection— Honest	.25 (.16)	.22 (.15)	$t(92) = 2.25,$ $p < .05$	.19
Correct detection— Deceptive		.12 (.11)	.08 (.12)	$t(92) = 2.64,$ $p < .05$	.35
Correct detection— Overall		.20 (.11)	.16 (.11)	$t(92) = 2.43,$ $p < .05$	.36
Misattributions		.27 (.11)	.23 (.11)	$t(92) = 3.22,$ $p < .01$	.36
Miss		.54 (.18)	.62 (.16)	$t(92) = 4.23,$ $p < .01$	.47
Correct rejection		.75 (.18)	.68 (.17)	$t(92) = 3.34,$ $p < .01$	.40
False alarms		.24 (.18)	.30 (.18)	$t(92) = 2.71,$ $p < .01$	.33
Study 3— Students		Correct detection— Honest	.23 (.13)	.15 (.10)	$t(136) = 6.95,$ $p < .01$	.69
	Correct detection— Deceptive	.19 (.14)	.06 (.09)	$t(136) = 10.02,$ $p < .01$	1.10
	Correct detection— Overall	.23 (.12)	.12 (.07)	$t(136) = 11.47,$ $p < .01$	1.12
	Misattributions	.24 (.10)	.20 (.10)	$t(136) = 4.33,$ $p < .01$	.40
	Miss	.53 (.16)	.68 (.12)	$t(136) = 15.00,$ $p < .01$	1.06
	Correct rejection	.73 (.13)	.70 (.13)	$t(136) = 2.78,$ $p < .01$	.23
	False alarms	.27 (.13)	.30 (.13)	$t(136) = 3.16,$ $p < .01$	.23

(continued)

TABLE 1 (continued)

	Indicator	Actual detection	Chance level	<i>t</i> -test	Cohen's <i>d</i>
Study 4— Students	Correct detection— Honest	.29 (.25)	.26 (.25)	$t(48) = .61,$ $p = .54$	.12
	Correct detection— Deceptive	.12 (.16)	.13 (.16)	$t(48) = .53,$ $p = .59$	.06
	Correct detection— Overall	.20 (.12)	.19 (.12)	$t(48) = .45,$ $p = .65$	.08
	Misattributions	.29 (.15)	.25 (.13)	$t(48) = 1.66,$ $p = .10$	.07
	Miss	.51 (.19)	.56 (.20)	$t(48) = 1.63,$ $p = .11$	.26
	Correct rejection	.66 (.24)	.55 (.27)	$t(48) = 2.53,$ $p < .05$	.43
	False alarms	.29 (.23)	.38 (.27)	$t(48) = 2.41,$ $p < .05$	.35

Note. $N = 154, 92, 136,$ and 48 (professional or novice) interviewers for Studies 1, 2, 3, and 4, respectively. Standard deviations are in parentheses. Chance level was computed using the “surrogate” method by creating pseudo-dyads using another video source (Louwerse et al., 2012).

proportion of *correct detections* for honest IM, the proportion of *correct detections* for deceptive IM, the overall proportion of *correct detections*, and the proportion of *correct rejections* as dependent variables, with data aggregated at the interviewer level (i.e., across the two interviews). An illustration of how these indicators are computed can be found in Appendix A. Because the dependent variables were proportions, including values of zero and one, we used STATA's generalized linear model with a logit transformation of the dependent variable and the binomial distribution (Papke & Wooldridge, 1996). For each regression, our control variables (i.e., interviewer gender, age, & level of education) were entered in Model 1. We also controlled for the number of tactics coded by interviewers to avoid favoring or disadvantaging interviewers who chose the strategy of coding profusely. Our variable of interest (i.e., interviewer experience) was then added in Model 2. Interviewing experience did not predict *correct detections* or *correct rejections* indicators. More experienced interviewers were not better at detecting IM tactics, providing an initial answer to Research Question 2.

Hypotheses 3a, 3b, and 3c, examining the impact of interviewers' perceptions of honest and deceptive IM on their evaluations of applicants, were tested simultaneously with multilevel regression analyses (Table 4) using STATA 12 (2011). We first entered interviewer-level control variables (i.e., gender, age, education level, experience) in Model 1.

TABLE 2
Means, Standard Deviations, and Correlations Among Main Variables (Study 1)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Age	41.24	8.95																			
Gender	1.49	.50	-.19																		
Level of education	1.79	.41	-.14	-.06																	
Experience	9.61	7.57	.71	-.31	-.06																
Applicant use of self-promotion	5.66	.50	-.01	.05	.04	-.04															
Applicant use of ingratiation	.33	.74	-.01	.07	.02	-.03	.30														
Applicant use of image protection	3.52	2.46	-.08	-.01	-.06	-.05	-.25	.27													
Applicant use of image creation	2.16	1.59	.08	-.03	.04	.07	.05	.22	-.38												
Perceived self-promotion	1.42	1.27	.09	-.01	.04	.07	.11	-.06	-.03	-.08											
Perceived ingratiation	.37	.66	-.02	-.03	-.06	-.01	.11	.48	.18	.10	-.04										
Perceived image protection	1.48	1.11	.06	-.04	.01	.10	-.01	-.01	-.06	.05	.05	.04									
Perceived image creation	1.23	1.22	.10	-.08	.07	.07	.20	.01	-.17	.19	.09	.04	.25								
Applicant evaluation	2.51	.99	.04	-.01	-.02	-.02	-.05	-.03	-.03	-.11	.18	-.05	-.20	-.22							

(continued)

TABLE 2 (continued)

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Correct detection— Honest	.13	.16	.12	-.08	-.01	.08	.16	.09	.15	-.03	.70	.08	.08	.07	.07						
Correct detection— Deceptive	.14	.20	-.05	.04	.01	.02	.21	.14	.02	-.05	.07	.09	.33	.28	-.08	.12					
Correct detection— Overall	.13	.12	.08	-.01	.02	.07	.28	.21	.15	.00	.50	.17	.30	.31	-.06	.76	.61				
Misattributions	.14	.13	.03	-.06	-.04	.03	.14	-.10	-.08	-.11	.25	.13	.43	.49	-.04	.02	.08	.04			
Miss	.73	.18	-.07	.05	.01	-.07	-.29	-.06	-.03	.08	-.51	-.21	-.51	-.56	.06	-.51	-.46	-.69	-.75		
Correct rejection	.82	.18	-.10	.03	-.08	-.11	-.05	.25	.46	-.13	-.29	-.02	-.31	-.36	.11	.00	.03	.03	-.19	.12	
False alarms	.17	.17	.09	-.04	.06	.11	.01	-.22	-.46	.08	.25	.03	.33	.34	-.11	-.04	-.01	-.04	.14	-.08	-.96

Note. $N = 154/308$ at interviewer/interview level. Gender: 1 = male, 2 = female; level of education: 1 = secondary, 2 = tertiary. Values above .11 or below $-.11$ are significant at $p < .05$. Values above .15 or below $-.15$ are significant at $p < .01$.

TABLE 3
GLM Regression Predicting Proportions of Correct Detections and Rejections, Studies 1–3

Predictor	Study 1				Study 2				Study 3				
	Correct detections honest IM	Correct detections deceptive IM	Correct rejections	Correct detections total	Correct detections honest IM	Correct detections deceptive IM	Correct rejections	Correct detections total	Correct detections honest IM	Correct detections deceptive IM	Correct rejections	Correct detections total	
Model 1													
Intercept	-3.21 (.58)	-2.44 (.87)	3.41 (.46)	-3.31 (.40)	-58 (.62)	-3.77 (.91)	.48 (.70)	-1.71 (.53)	-1.64 (.56)	-2.01 (.92)	-48 (.70)	-1.86 (.62)	2.64 (.44)
Gender	-.10 (.15)	.16 (.20)	-.06 (.12)	.08 (.10)	-.56* (.17)	-.09 (.21)	.23 (.17)	-.41** (.14)	.06 (.11)	-.01 (.15)	.08 (.10)	.08 (.10)	.01 (.08)
Age	.01 (.01)	-.01 (.01)	-.01 (.01)	.01 (.01)	-.00 (.01)	.01 (.01)	-.01 (.01)	.00 (.01)	-.03 (.02)	-.01 (.04)	-.01 (.01)	-.02 (.02)	-.04 (.02)
Level of education	-.07 (.16)	-.04 (.24)	-.20 (.15)	.01 (.11)	.28 (.20)	-.21 (.27)	.08 (.22)	.17 (.15)	.20 (.13)	-.07 (.16)	.06 (.11)	.06 (.11)	.07 (.08)
Number of coding	.24** (.04)	.21** (.04)	-.23** (.02)	.22** (.03)	.00 (.01)	.03** (.01)	.02** (.01)	.01* (.00)	.10** (.02)	.10** (.02)	.02** (.01)	.11** (.02)	-.13** (.02)
Log pseudo-likelihood	-42.28	-45.30	-50.62	-41.79	-36.70	-24.67	-40.31	-31.98	-49.36	-46.00	-40.31	-48.98	-52.26
Model 2													
Intercept	-3.28 (.58)	-2.19 (.84)	3.31 (.50)	-3.26 (.41)	-3.96 (1.03)	-5.68 (1.50)	5.93 (.95)	-5.04 (.83)	-1.66 (.57)	-2.29 (.93)	5.93 (.95)	-2.11 (.61)	2.98 (.41)
Gender	-.13 (.16)	.24 (.21)	-.09 (.13)	.10 (.11)	-.51** (.16)	-.06 (.20)	.11 (.14)	-.35** (.12)	.06 (.11)	-.00 (.15)	.11 (.14)	.09 (.10)	.01 (.07)
Age	.01 (.01)	-.03 (.02)	-.00 (.01)	.00 (.01)	-.00 (.01)	.02 (.02)	-.01 (.01)	.01 (.01)	-.03 (.02)	-.01 (.03)	-.01 (.01)	-.02 (.02)	-.03 (.02)
Level of education	-.06 (.16)	-.06 (.23)	-.01 (.11)	.01 (.11)	.22 (.18)	-.22 (.27)	.05 (.14)	.11 (.13)	.20 (.12)	-.03 (.16)	.05 (.14)	.10 (.11)	.01 (.08)
Number of coding	.24** (.04)	.21** (.04)	-.23** (.02)	.22** (.03)	.03** (.01)	.05** (.01)	-.04** (.01)	.04** (.01)	.10** (.01)	.10** (.02)	-.04** (.01)	.11** (.02)	-.14** (.02)
Experience	-.01 (.01)	.03 (.02)	-.01 (.01)	.00 (.01)	-.00 (.02)	-.02 (.02)	.00 (.01)	-.01 (.01)	.10** (.01)	.10** (.02)	.00 (.01)	.11** (.02)	-.14** (.02)
Question type													
Log pseudo-likelihood	-42.27	-45.13	-50.59	-41.79	-35.70	-24.52	-36.66	-31.21	-49.35	-45.90	-36.66	-48.89	-52.06

Note. $N = 154, 92$, and 136 (professional or novice) interworkers for Studies 1, 2, and 3, respectively. Values are unstandardized coefficients (after a logit transformation and with a binomial distribution) with robust SE in brackets. Gender: 1 = male, 2 = female; level of education: 1 = secondary, 2 = tertiary (1 = bachelor, 2 = master for study 3); question type: 1 = past-behavior, 2 = situational.
^a $p < .05$. ^{**} $p < .01$.

TABLE 4
Multilevel Linear Regression Predicting Interviewers' Evaluations of Interview Performance (Studies 1-3)

Predictor	Study 1 Interviewer sample			Study 1 Interviewer sample			Study 1 Student sample		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Intercept	2.24 (.41)	3.71 (.92)	3.48 (.96)	3.09 (.35)	2.24 (.37)	2.65 (.39)	3.30 (.31)	2.19 (.36)	2.69 (.38)
Interviewer-level variables									
Gender	-.04 (.11)	-.06 (.11)	-.07 (.11)	-.07 (.09)	-.11 (.09)	-.08 (.09)	.15* (.07)	.16* (.08)	.15* (.07)
Age	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.00 (.01)	-.03† (.01)	-.02 (.01)	-.02 (.01)
Level of education	-.02 (.11)	-.02 (.11)	-.01 (.11)	-.15 (.11)	-.11 (.12)	-.15 (.11)	.10 (.09)	.09 (.09)	.13 (.09)
Experience	-.01 (.01)	-.01† (.01)	-.01 (.01)	-.02* (.01)	-.02* (.01)	-.01 (.01)			
Question type				.04 (.09)	.20† (.11)	.15 (.10)	-.11 (.07)	.10 (.08)	.01 (.08)
Interview-level variables									
Applicant use of self-promotion		-.19 (.13)	-.15 (.13)		.09** (.02)	.06* (.02)		.14** (.02)	.10** (.02)
Applicant use of image repair					-.01 (.03)	-.01 (.03)		.04 (.03)	.03 (.03)
Applicant use of ingratiation		.10 (.08)	.11 (.09)						
Applicant use of image protection		-.06† (.03)	-.06† (.03)		-.06 (.07)	-.06 (.05)		-.05 (.04)	-.04 (.04)
Applicant use of slight image creation		-.11* (.04)	-.05 (.04)		.05 (.03)	.01 (.03)		.02 (.03)	.03 (.04)

(continued)

TABLE 4 (continued)

Predictor	Study 1 Interviewer sample			Study 1 Interviewer sample			Study 1 Student sample		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Applicant use of ext. image creation				.00 (.04)		.02 (.04)	.04 (.04)		.06 [†] (.03)
Perceived self-promotion			.15* (.07)			.21** (.03)			.15** (.02)
Perceived image repair						-.01 (.04)			-.00 (.05)
Perceived ingratiation			-.13 (.15)						-.09* (.04)
Perceived image protection			-.26** (.08)						.01 (.03)
Perceived slight image creation			-.22** (.07)						-.14** (.02)
Perceived extensive image creation									
<i>F</i>	.80	1.46	4.23**	1.71	4.86**	10.62**	3.58**	12.03**	19.44**
<i>R</i> ²	.01	.03	.16	.02	.09	.34	.02	.16	.31
ΔR^2		.02	.13**		.07	.25**		.14	.15**

Note. *N* = 154/308, 92/368, and 136/408 at interviewer/interview level, respectively. Values are unstandardized coefficients (robust SE in brackets) controlled for fixed effects using the Mundlak (1978) procedure. Intraclass correlation (ICC) = .24, .20, and .19, respectively. Gender: 1 = male, 2 = female; level of education: 1 = secondary, 2 = tertiary (for students: 1 = bachelor, 2 = master); question type: 1 = past-behavior, 2 = situational. [†]*p* < .10. **p* < .05. ***p* < .01.

In Model 2, we added applicants' actual use of IM tactics, explaining 2% of additional variance. Finally, in Model 3, we included interviewers' perceptions of IM tactics, explaining 13% of additional variance. Because we have clustered data (i.e., interviewers evaluating several applicants), which may lead to the problem of omitted fixed effects, we included the cluster means of all interviewer-level covariates in the estimated model (not presented in Table 4) using the procedure developed by Mundlak (1978). This procedure allows capturing unobserved heterogeneity in the evaluations of applicants clustered within a particular interviewer and ensures consistent estimation of applicant-level parameters (see Antonakis, Bendahan, Jacquart, & Lalive, 2010 for detailed explanations on how to use this approach). Hypothesis testing was done on Model 3.

Interviewers' perceptions of self-promotion were positively related to their evaluations of applicant performance ($b = 0.15$, $SE = .07$, $p < .05$), supporting Hypothesis 3a. Moreover, interviewers' perceptions of image protection were negatively related to their evaluations of applicant performance ($b = -0.26$, $SE = .08$, $p < .01$), supporting Hypothesis 3b. Perceptions of image creation were negatively related to evaluations of applicant performance ($b = -0.22$, $SE = .07$, $p < .01$), supporting Hypothesis 3c.

Study 2

Study 2 is based on the same approach as Study 1 and extends it by eliminating some of its limitations. More precisely, Study 2 involves five types of IM tactics (self-promotion, image repair, image protection, slight and extensive image creation) instead of four, a more precise measure of IM use by applicants (that involves coding the onset & offset for each IM tactic instead of simply points in time), interviews with more experienced applicants (people currently working as project managers instead of students), and a manipulation of interview question type (i.e., situational vs. past-behavior). As in Study 1, we also examine the relationship between interviewers' perceived IM and their evaluations of applicant performance.

Method

Sample. The sample comprised 92 professional interviewers working in 62 different organizations in Switzerland. A total of 52.2% of interviewers were female, the mean age was 39.9 years ($SD = 9.1$), and they possessed a mean of 10.4 years ($SD = 7.6$) of interviewing experience. Interviewers had conducted on average 1,210 interviews in their career ($SD = 2046$) and 20 interviews in the past 3 months ($SD = 22$). A

majority (82.6%) held a university degree or equivalent. Interviewers were contacted by phone or email. About 20% of contacted interviewers agreed to participate and data collection took place in their offices.

Materials and procedures. Eight employees (4 women and 4 men) who worked as project managers in local companies were hired to participate as applicants for a project manager position. They were between 25 and 30 years old and had at least 1 year of experience in their position. They thus could base their answers on actual work experience in a similar job. They participated in a short video-recorded mock interview and answered three questions measuring leadership, persuasiveness, and communication skills, respectively. Two versions of the interview were recorded. The first version included past-behavior questions (e.g., "Please tell me about a time when you were working on an important project in a team. How did you use your leadership skills to help the team complete the project?"). The second version included situational questions (e.g., "Imagine you are working on an important project in a team. This project has to be completed by the end of the day. How would you use your leadership skills to help the team complete the project?").

As in Study 1, after the interviews, the first author conducted extensive sessions with each applicant to ensure reliable and valid coding. Applicants read a description of five types of IM tactics (i.e., self-promotion, image repair, image protection, slight and extensive image creation) and illustrative examples of these tactics. They then completed an eight-item test to ensure they understood the differences between IM tactic types. Incorrect answers were discussed with the applicants to ensure proper understanding of the IM tactics. Then, applicants watched the videos of their interviews and coded IM use. This time we asked them to indicate the onset and offset of each IM tactic in order to capture the duration of each tactic. This approach allowed us to obtain more precise measures of IM use and, indirectly, more precise measures of IM detection accuracy of interviewers. Again, it was possible to pause and rewind the video and to ask clarification questions. Several versions of the interviews were recorded and coded, and four videos per applicant were chosen based on the rules described in the Study 1 (including two past-behavior and two situational interviews). Overall, applicants coded, on average, five honest IM tactics (for an average total of 143 seconds) and 4.2 deceptive IM tactics (for an average total of 77 seconds) per interview.

Procedures for professional interviewers were similar to the procedures described in Study 1. They read the project manager job description and watched a video with four interviews of applicants for the position. Their task was to detect IM tactics used by applicants in real time. Each interviewer was randomly assigned to one of eight possible combinations of four interviews and thus watched a total of 20–25 minutes of interviews. Each combination was composed of interviews with the same

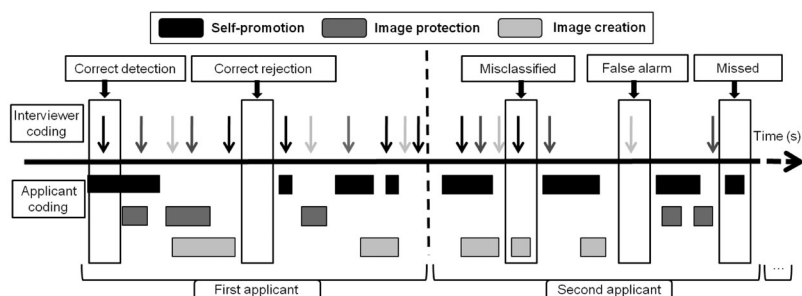


Figure 2: Illustration of Coding and Detection Indicators for Studies 2, 3, and 4.

type of questions (either past-behavior only or situational only), two female and two male applicants, and we counterbalanced the arrangement and order of applicants. Interviewers were provided with the same definitions, examples, and test as the applicants. Real-time detection (point estimates at the times when they perceived applicants to use IM) and evaluation of applicants was similar to Study 1.

Measures

IM detection indicators. We used the same five detection indicators as in Study 1. Yet, in this study, applicants reported the onset and offset of each IM tactic used, thus defining precise time windows of IM use (e.g., use of *image protection* between seconds 70 and 90 of the interview). Because interviewers may take some time to perceive a tactic, we considered coding within the time period and those in the 5 seconds following the period to be simultaneous with applicants' coding. Thus, for instance, if the applicant reported using *image protection* between seconds 70 and 90 of interview, interviewers' coding of *image protection* between seconds 70 and 95 of interview were considered as *correct detections*. A graphical illustration can be found in Figure 2.

Perceived interview performance. Interviewers completed a seven-item scale (where 1 = *completely disagree* and 5 = *completely agree*; $\alpha = .91$) measuring perceived overall applicant performance in each interview similar to the one used in Study 1: "The applicant was able to convince me that he/she had the required abilities for the position," "the applicant made a good impression on me," "the applicants provided good answers to interview questions," "the applicant made me aware of his/her past successes," "the applicant performed well during the interview," "the applicant was well prepared for the interview," and I would give a good evaluation to this applicant.

Control variables. Interviewing experience, gender, age, and education level were included in our analyses.

Results

The means and standard deviations for all our detection indicators and chance levels are presented in Table 1, allowing us to further explore our Research Question 1 about interviewers' detection abilities. Interviewers' percentage of *correct detections* was low (i.e., 19.6%), albeit significantly higher than chance level (i.e., 16%, $t(92) = 2.43$, $p < .05$, $d = .36$). Correlations among study variables are presented in Table 5. We tested Hypothesis 1 examining the difference in correct detection between honest and deceptive IM with an analysis of variance (ANOVA). We found a difference in the expected direction, with the percentage of *correct detections* being higher for honest IM (25.5%) than for deceptive IM (12.2%, $F[1, 91] = 49.66$, $p < .001$). Hypothesis 1 was thus supported in this study.

We tested Hypothesis 2 and Research Question 2, examining the impact of question type and interviewer experience on detection simultaneously with regression analyses using STATA 12 (2011) (Table 3). The approach was similar to the one used in Study 1, this time with question type and experience entered as predictors. Question type was a significant predictor of *correct detections* and *correct rejections*. Interviewers detected more IM tactics correctly in situational than in past-behavior interviews, but they also got lower *correct rejections* in situational than in past-behavior interviews. There was also a higher proportion of *correct detections* for honest IM in situational than in past-behavior interviews, but there was no difference for deceptive IM. Furthermore, to examine the actual difference between past-behavior and situational interviews, we computed marginal effects to obtain the predicted percentage of correct detection if all other variables are held constant. Predicted means for *correct detections* for situational and past-behavior interviews were 29.1% and 13.4%, respectively (and 26.5% and 17% for *correct detections* of honest IM only). Predicted means for *correct rejections* for situational and past-behavior interviews were 46.5% and 85.9%, respectively. Together, these results partly support Hypothesis 2. Moreover, like in Study 1, experience did not predict *correct detection* or *correct rejection* indicators. More experienced interviewers were not better at detecting IM tactics.

Hypotheses 3a, 3b, and 3c examining the impact of interviewers' perceptions of honest and deceptive IM on their evaluations of applicant interview performance were tested simultaneously with multilevel regression analyses (Table 4) using STATA 12 (2011) using the same approach as in Study 1: We first entered interviewer-level control variables (i.e.,

TABLE 5
Means, Standard Deviations, and Correlations Among Main Variables (Study 2)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Age	39.86	9.09																						
2. Gender	1.52	.50	-.04																					
3. Level of education	1.83	.38	.09	.02																				
4. Experience	10.30	7.05	.78	-.06	.12																			
1. Question type	1.50	.50	.06	.00	.11	-.04																		
2. Applicant use of self-promotion	4.26	2.16	-.03	.05	-.09	.01	-.34																	
3. Applicant use of image repair	1.06	1.34	.03	.01	-.03	.01	-.04	-.09																
4. Applicant use of image protection	.38	.66	.10	-.05	.07	.04	-.10	-.05	.22															
5. Applicant use of slight image creation	2.60	1.59	-.04	.06	-.05	.00	-.29	.48	-.11	-.10														
6. Applicant use of ext. image creation	1.27	1.54	-.03	-.01	-.07	.00	-.47	.38	-.27	-.04	.43													
7. Perceived self-promotion	2.57	2.41	-.04	-.19	.00	-.09	.05	.26	.04	.03	.17	.06												
8. Perceived image repair	1.15	1.31	.10	.01	.06	.10	-.11	.13	.14	-.05	.15	.05	.27											
9. Perceived image protection	.73	1.01	-.08	-.02	.01	-.05	-.09	.13	.10	.09	.05	.06	-.08	.15										
10. Perceived slight image creation	1.37	1.53	.08	-.15	-.02	.10	-.14	.25	.02	.13	.14	.23	.32	.22	.13									
11. Perceived ext. image creation	.45	1.19	.04	-.04	.01	.11	-.10	.11	.02	.12	-.02	.17	-.06	.10	.17	.44								
12. Applicant evaluation	2.89	.88	-.03	-.04	-.07	-.08	.02	.24	-.06	-.08	.17	.08	.43	.12	-.14	.03	-.20							
13. Correct detection—Honest	.25	.26	-.01	-.20	.07	-.02	.16	-.07	-.11	-.15	-.08	-.02	.51	.22	-.14	.02	-.10	.26						
14. Correct detection—Deceptive	.12	.20	.06	-.05	-.06	.04	-.11	-.05	-.10	.02	-.01	-.11	.00	.07	.03	.40	.25	-.11	.06					
15. Correct detection—Overall	.20	.19	.03	-.18	.04	.01	.10	-.04	-.08	-.14	-.12	-.16	.40	.21	-.08	.18	.04	.15	.83	.50				
16. Misattributions	.27	.21	-.05	-.12	.04	-.01	.11	-.28	.10	.00	-.23	-.06	-.01	.15	.17	.03	.02	-.05	-.17	-.11	-.26			
17. Miss	.54	.24	.04	.23	-.07	.02	-.17	.29	.13	.17	.27	.19	.31	-.27	-.06	-.17	-.05	-.11	-.57	-.30	-.56	-.63		
18. Correct rejection	.68	.34	-.05	.06	-.04	.00	-.39	.11	.21	.14	.20	.05	-.26	-.25	-.09	-.28	-.15	-.10	-.18	-.10	-.14	-.21	.29	
19. False alarms	.24	.27	.02	-.01	.01	.00	.27	-.15	-.04	-.01	-.09	-.12	.27	.27	.08	.31	.20	.04	.03	.10	.00	.26	-.23	-.99

Note. $N = 92/368$ at interviewer/interview level. Gender: 1 = male, 2 = female; level of education: 1 = secondary, 2 = tertiary; question type: 1 = past-behavior, 2 = situational. Values above .10 or below $-.10$ are significant at $p < .05$. Values above .13 or below $-.13$ are significant at $p < .01$.

gender, age, education level, experience, and type of interview question) in Model 1. In Model 2, we added applicants' actual use of IM tactics, explaining 7% of additional variance. Finally, in Model 3, we included interviewers' perceptions of IM tactics, explaining 25% of additional variance. Hypothesis testing was done on Model 3. Interviewers' perceptions of self-promotion were positively related to interview performance ratings ($b = 0.21$, $SE = .03$, $p < .01$), supporting Hypothesis 3a. Moreover, interviewers' perceptions of image protection were negatively related to interview performance ratings ($b = -0.17$, $SE = .05$, $p < .01$), supporting Hypothesis 3b. Perceptions of both perceived slight and extensive image creation were negatively related interview performance ratings, but only the former reached significance ($b = -0.06$, $SE = .03$, $p < .10$). Together, these results partially support Hypothesis 3c.

Study 3

This study is a simplified replication of Study 2 using only videos of male applicants and with a sample of novice interviewers (i.e., students) instead of professional interviewers. The main goal is to examine how accurate novices perform at detecting IM.

Method

Sample. The sample was composed of 136 students from a Swiss university, including 58.1% women. Mean age was 22.6 years ($SD = 2.8$). Two-thirds were master-level students and one-third were bachelor-level students, with 57% studying in business and economics and 43% studying law. They had participated on average in 3 employment interviews in the past ($SD = 3.5$). They were recruited at the university. Data collection took place in a lab at the university. Participation was voluntary and was not compensated.

Materials and procedures. The materials and procedure for Study 3 were the same as for Study 2, except that we only used the video-recorded interviews of the four male applicants. We created four combinations using the four interviews from each of our four male applicants. Each combination was composed of four interviews with the same type of questions (either past-behavior only or situational only), and we counterbalanced the arrangement and order of applicants. Overall, applicants used on average 4.9 honest IM tactics (for an average total of 113 seconds) and 3.5 deceptive IM tactics (for an average total of 60 seconds) per interview. Novice interviewers were randomly assigned to one out of four possible combinations of four interviews.

Measures. Overall, the measures were similar to Study 2; we used the same five detection indicators and coding approach as in Study 2. Novice interviewers completed the same seven-item perceived interview performance scale ($\alpha = .91$) as in Study 2. Finally, gender, age, and education level were included as control variables in our analyses.

Results

The means and standard deviations for all our detection indicators and chance levels are presented in Table 1, allowing us to further explore Research Question 1. Correlations among study variables are presented in Table 6. Novice interviewers' percentage of *correct detections* was low (i.e., 22.5%) but significantly higher than chance level (i.e., 12%, $t(136) = 11.47, p < .01, d = 1.12$). We tested Hypothesis 1 examining the difference in correct detection between honest and deceptive IM with an ANOVA. We found a difference in the expected direction, with the percentage of *correct detections* being higher for honest IM (22.6%) than for deceptive IM (18.5%, $F[1, 135] = 8.09, p < .01$). Hypothesis 1 was thus also supported with this study.

We tested Hypothesis 2 examining the impact of question type with regression analyses using STATA 12 (2011) using the same approach as in Studies 1–2. Question type was a significant predictor of *correct detections* and *correct rejections* (Table 3). Novice interviewers detected IM tactics more accurately in situational than in past-behavior interviews, but they also got lower *correct rejections* in situational than in past-behavior interviews. There was no effect of question type on honest or deceptive IM detection. Furthermore, to examine the actual difference between past-behavior and situational interviews, we computed marginal effects to obtain the predicted percentage of correct detection if all other variables are held constant. Predicted means for *correct detections* for situational and past-behavior interviews were 24.2% and 21.1%, respectively. Predicted means for *correct rejections* for situational and past-behavior interviews were 70.1% and 75%, respectively. Together, these results partly support Hypothesis 2. These results further suggest that the effect of question type was stronger with the professional interviewers sample (Study 2) than with novice interviewers (Study 3). Moreover, comparing results (i.e., the *correct detections* and *correct rejections* indicators) of professional interviewers (19.6% and 68.4%, respectively in Study 2) and novice interviewers (22.5% and 72.8%, respectively in Study 3) suggests that novices *may* be as accurate as professional interviewers at this task. However, results from Study 1 and Study 3 are not directly comparable

TABLE 6
Means, Standard Deviations, and Correlations Among Main Variables (Study 3)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1. Age	22.63	2.81																						
2. Gender	1.58	.49	-.09																					
3. Level of education	1.33	.47	.40	-.07																				
4. Question type	1.46	.50	.07	.00	-.17																			
5. Applicant use of self-promotion	3.81	2.03	-.06	.00	.05	-.32																		
6. Applicant use of image repair	1.78	1.53	.00	-.01	.01	.01	.39																	
7. Applicant use of image protection	.51	.80	.01	.01	-.04	.16	-.20	.16																
8. Applicant use of slight image creation	2.46	1.57	-.01	-.03	.02	.00	.25	.04	-.19															
9. Applicant use of ext. image creation	.86	1.11	-.03	-.01	.07	-.26	.00	-.34	-.01	.13														
10. Perceived self-promotion	2.66	2.51	-.06	.02	.11	-.09	.43	.08	-.02	.15	.01													
11. Perceived image repair	1.12	1.25	.02	-.03	.07	-.16	.24	.26	-.11	.07	-.06	.18												
12. Perceived image protection	.67	1.03	-.01	-.11	.02	-.09	.05	.02	.02	.10	-.02	.08	.23											
13. Perceived slight image creation	1.84	2.02	-.07	-.04	-.01	-.06	.18	-.01	-.07	.37	.01	.27	.18	.18										
14. Perceived ext. image creation	.82	1.67	.12	-.04	.05	-.02	-.07	-.16	.01	.19	.22	.03	.05	.25	.17									
15. Applicant evaluation	2.92	.88	-.07	.09	.03	-.08	.37	.19	-.10	.13	.01	.20	.03	-.09	.00	-.27								
16. Correct detection—Honest	.23	.22	-.03	.00	.09	-.06	.37	.10	-.14	.03	.01	.56	.29	.07	.18	.04	.20							
17. Correct detection—Deceptive	.18	.29	-.01	-.02	.01	-.08	-.25	-.14	.15	-.08	.04	.09	.12	.49	.16	-.11	.09							
18. Correct detection—Overall	.22	.21	-.03	.01	.05	.00	.11	-.09	-.17	.10	-.06	.36	.30	.12	.41	.11	.01	.75	.69					
19. Misattributions	.24	.20	.02	-.01	-.01	-.05	-.09	-.17	.04	-.03	.11	.06	.08	.26	.13	.25	-.13	-.14	-.17	-.29				
20. Miss	.53	.25	.01	.00	-.04	.05	-.03	.21	.11	-.07	-.04	-.36	-.33	-.31	-.46	-.30	.10	-.50	-.46	-.64	-.55			
21. Correct rejection	.73	.26	-.04	.03	-.04	-.03	.35	.43	.11	.14	-.03	-.21	-.14	-.18	-.29	-.20	.16	-.13	-.29	-.26	-.15	.35		
22. False alarms	.27	.26	.05	-.04	.05	.04	-.36	-.44	-.11	-.13	.03	.19	.15	.17	.30	.21	-.18	.12	.30	.25	.16	-.35	-.99	

Note. $N = 136/408$ at interviewer/interview level. Gender: 1 = male, 2 = female; level of education: 1 = bachelor, 2 = master; question type: 1 = past-behavior, 2 = situational. Values above .09 are significant at $p < .05$. Values above .11 or below $-.11$ are significant at $p < .01$.

because the stimuli material, types of IM tactics coded, and design were different.

Hypotheses 3a, 3b, and 3c examining the impact of perceptions of honest and deceptive IM on interview performance ratings were tested simultaneously with multilevel regression analyses (Table 4) using STATA 12 (2011) like in Studies 1 and 2. We first entered interviewer-level control variables (i.e., gender, age, education level, and type of interview question) in Model 1. In Model 2, we added applicants' actual use of IM tactics, explaining 14% of additional variance. Finally, in Model 3 we included interviewers' perceptions of IM tactics, explaining 15% of additional variance. Hypothesis testing was done on Model 3. Interviewers' perceptions of self-promotion were positively related to interview performance ratings ($b = 0.15$, $SE = .02$, $p < .01$), supporting Hypothesis 3a. Moreover, interviewers' perceptions of image protection were negatively related to interview performance ratings ($b = -0.09$, $SE = .04$, $p < .05$), supporting Hypothesis 3b. Only perceptions of extensive image creation (but not slight image creation) were negatively related to interview performance ratings ($b = -0.14$, $SE = .02$, $p < .01$). These results partially support Hypothesis 3c.

Study 4

Study 4 was conducted to exclude a potential limitation associated with the design of Studies 1–3. Asking interviewers to detect IM in real time may make IM salient and thus artificially increase the relationship between perceived IM and performance evaluations.¹ In other words, interviewers may have been primed to focus on IM and to take more account of IM in completing their performance evaluations than they would usually do. If this is the case, then our findings may not generalize to real interview situations, where interviewers may not be as focused on IM as they are when asked to look for it. On the other hand, however, had interviewers filled out the more global performance evaluations first, we would not expect those evaluations to prime the more specific IM measures because responses to specific questions prime subsequent responses to more global ones but not the other way around (see Schwarz, Strack, & Mai, 1991; Strack, Martin, & Schwarz, 1988). We exploited this asymmetry in Study 4, where novice interviewers *first* watched the video-recorded interview and evaluated applicant performance (i.e., a global response). Then, they watched the same video *again* and coded IM in real time (i.e., a specific

¹We thank an anonymous reviewer for highlighting this limitation.

response) as in Studies 1–3. If we still find a link between global performance evaluated first and specific IM measures evaluated subsequently, this would reduce the concern that priming affected relations between perceived IM and performance in Studies 1–3 (because interviewers were not primed to focus on IM with this design).

Method

Sample. The sample of novice interviewers was composed of 48 students from a Swiss university, including 42% of women. Mean age was 22.8 years ($SD = 2.8$). Thirty-two were master-level students and 16 were bachelor-level students, with 27% studying in business and economics, 40% humanities, 19% social sciences, and 14% other topics. They had participated on average in 3.9 employment interviews in the past ($SD = 4.2$). All interviewers were recruited at the university and were paid an equivalent of \$10 for their participation.

Materials and procedures. Interviewers played the role of a hiring manager and read the same job description as in Studies 2–3. They were randomly assigned to watch one 5-minute video of an applicant for the job (out of eight possible videos of past-behavior interviews with applicants from Study 2). They did not receive any instruction to focus on IM at that stage. Then they completed the perceived interview performance measure. Subsequently, they were informed about the five types of IM tactics (i.e., read the same definitions & completed the same test as in Studies 2–3) and watched the same video again while coding IM in real time with Noldus Observer XT (2009).

Measures. Overall, the measures were similar to Studies 2 and 3: we used the same five detection indicators and coding approach. Interviewers completed the same seven-item perceived interview performance scale ($\alpha = .84$). Finally, gender, age, and education level were included as control variables in our analyses.

Results

The means and standard deviations for all our detection indicators and chance levels are presented in Table 1. Correlations among study variables are presented in Table 7. Related to Research Question 1, although this time novice interviewers detected IM while watching the same video a second time, percentage of *correct detections* was again rather low (i.e., 19.6%) and not significantly above chance level (i.e., 19%, $t(48) = .45$, $p = .65$, $d = .08$). In line with Hypothesis 1, an ANOVA showed a higher percentage of *correct detections* for honest IM (29.1%) than for deceptive IM (11.8%, $F[1, 47] = 13.75$, $p < .01$).

TABLE 7
Means, Standard Deviations, and Correlations Among Main Variables (Study 4)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1. Age	22.75	2.80																					
2. Gender	1.42	.50	-.20																				
3. Level of education	1.35	.53	.48	-.01																			
4. Applicant use of self-promotion	4.90	1.78	-.09	.19	-.12																		
5. Applicant use of image repair	1.06	1.33	-.04	.12	-.03	-.08																	
6. Applicant use of image protection	.60	.49	.00	.17	-.10	.10	.43																
7. Applicant use of slight image creation	3.73	1.65	.13	-.02	.19	.07	-.10	-.08															
8. Applicant use of ext. image creation	2.31	1.67	.05	.02	-.01	.51	-.56	-.31	.52														
9. Perceived self-promotion	4.02	3.15	-.04	.24	-.07	.19	.05	-.02	.28	.13													
10. Perceived image repair	1.13	1.06	-.10	.10	-.23	.01	.39	.18	-.10	-.26	.44												
11. Perceived image protection	1.08	1.51	.13	-.08	-.04	.00	-.24	-.15	.28	.25	.28	.05											
12. Perceived slight image creation	2.67	3.53	.30	-.26	.09	.06	-.08	-.09	.23	.21	-.03	-.21	.07										
13. Perceived ext. image creation	.79	1.86	.13	.05	.27	.14	-.11	.14	-.12	-.07	-.21	-.17	.12	.08									
14. Applicant evaluation	3.07	.71	-.07	.37	-.21	.25	-.05	.13	.04	.24	.41	.17	-.03	-.13	-.13								
15. Correct detection—Honest	.29	.25	-.05	.27	.06	.08	-.11	-.05	.34	.27	.70	.13	.10	.02	-.27	.32							
16. Correct detection—Deceptive	.12	.16	.25	-.14	.31	-.24	.13	.15	.10	-.25	-.22	-.24	.25	.36	.39	-.27	-.20						
17. Correct detection—Overall	.20	.12	.08	.14	.21	-.04	.10	.05	.19	-.08	.49	.08	.22	.28	.04	.01	.67	.51					
18. Misattributions	.29	.15	-.06	-.09	.02	-.23	-.31	-.19	-.24	-.12	.23	.10	.41	-.05	.27	-.01	.00	.00	.01				
19. Miss	.51	.19	.02	-.02	-.14	.21	.18	.12	.07	.12	-.47	-.12	-.45	-.12	-.23	.01	-.42	-.31	-.62	-.78			
20. Correct rejection	.66	.24	-.27	.00	-.12	.02	.19	-.08	-.11	-.08	-.39	-.08	-.39	-.18	-.21	-.24	-.37	-.15	-.32	-.20	.33		
21. False alarms	.29	.23	.27	-.10	.14	.13	-.03	-.08	-.04	.00	.14	.24	.28	.15	.31	.09	-.15	.12	-.01	.15	-.09	-.69	

Note. N = 48 novice interviewers. Gender: 1 = male, 2 = female; level of education: 1 = bachelor, 2 = master. Values above .30 or below -.30 are significant at $p < .05$. Values above .37 or below -.37 are significant at $p < .01$.

We examined the relationship between novice interviewers' global perceptions of IM and their evaluations of applicant performance with linear regressions (Table 8). We first entered control variables (i.e., gender, age, and education level) in Model 1. In Model 2, we added applicants' actual use of IM tactics, explaining 7% of additional variance. Finally, in Model 3 we included interviewers' perceptions of IM tactics, explaining 15% of additional variance. Hypothesis testing was done on Model 3. Interviewers' perceptions of self-promotion were positively related to interview performance ratings ($b = 0.10$, $SE = .04$, $p < .05$), providing additional support to Hypothesis 3a. Relationships between perceptions of deceptive IM and evaluations of applicant performance (i.e., Hypotheses 3b and 3c) were mostly in the expected direction but less strong than in the earlier studies (and nonsignificant). For instance, perceptions of image protection ($b = -0.09$, $SE = .07$, $p = .24$) and slight image creation ($b = -0.02$, $SE = .03$, $p = .53$) were negatively (but not significantly) related to interview performance ratings. Thus, we can exclude priming as an explanation for the impact of perceived honest IM on interviewers' evaluations of applicants, but we cannot completely eliminate such an explanation for deceptive IM.

Study 5

The aim of Study 5 is to deal with another potential limitation associated with the design of the previous studies. In actual interviews, interviewers may not try to detect specific IM tactics in real time. Rather, they may form global perceptions of IM use after the interview that they subsequently use in their evaluation of applicant performance. As a further test of the external validity of our findings, Study 5 uses an alternative experimental design. Novice interviewers watched one video-recorded interview and then rated global perceptions of IM use and applicant performance. This allows testing if results obtained with specific IM coding in real time can be replicated using (potentially more realistic) global perception measures at the end of the interview.

Method

Sample. The sample of novice interviewers was composed of 86 students from a Swiss university, including 51% women. Mean age was 22.4 years ($SD = 2.4$). Thirty-eight percent were master-level students and 62% were bachelor-level students, with 35% studying business and economics, 34% law, 19% engineering, and 13% social sciences. They had participated on average in 3 employment interviews in the past

TABLE 8
Linear Regression Predicting Interviewers' Evaluations of Interview Performance (Studies 4-5)

Predictor	Study 4			Study 5		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Intercept	1.95* (.91)	1.87 (.98)	1.95 (.97)	3.96** (.85)	3.45** (.76)	1.89* (.81)
Gender	.57** (.19)	.52* (.21)	.34 (.21)	-.26 (.16)	-.07 (.15)	-.19 (.14)
Age	.04 (.04)	.03 (.04)	.03 (.04)	-.02 (.04)	-.06 (.03)	-.02 (.03)
Level of education	-.38 (.21)	-.31 (.22)	-.29 (.23)	.27 (.18)	.17 (.20)	.11 (.19)
Order				-.29 (.16)	-.22 (.14)	-.13 (.13)
Applicant use of self-promotion		-.01 (.08)	-.06 (.08)		-.02 (.06)	.01 (.05)
Applicant use of image repair		.01 (.10)	.01 (.11)		.21* (.08)	.13 (.08)
Applicant use of image protection		.20 (.23)	.26 (.23)		.63** (.18)	.41* (.18)
Applicant use of slight image creation		-.04 (.08)	-.09 (.08)		-.06 (.05)	-.06 (.05)
Applicant use of ext. image creation		.14 (.12)	.20 (.12)		.33** (.08)	.22* (.08)
Perceived self-promotion			.10* (.04)			.34** (.09)
Perceived image repair			-.02 (.11)			.01 (.06)
Perceived image protection			-.09 (.07)			-.07 (.07)
Perceived slight image creation			-.02 (.03)			.13 (.07)
Perceived extensive image creation			.01 (.06)			-.07 (.08)
<i>F</i>	3.65*	1.78	1.84	1.58	4.86**	5.44**
<i>R</i> ²	.20	.27	.41	.08	.37	.52
ΔR^2		.07	.15	—	.25**	.15**

Note. $N = 48$ (Study 4) and $N = 86$ (Study 5) novice interviewers. Values are unstandardized coefficients (*SE* in brackets). Gender: 1 = male, 2 = female; level of education: 1 = bachelor, 2 = master; order: 1 = IM perceptions—performance, 2 = performance—IM perceptions.
 * $p < .05$. ** $p < .01$.

($SD = 3.5$). Novice interviewers were recruited at the university and participated voluntarily without compensation.

Procedures. Interviewers played the role of a hiring manager and read the same job description as in Studies 2–4. They were randomly assigned to watch one of eight 5-minute videos of an applicant for the job (the same as in Study 4). Interviewers did not receive any instructions to focus on IM. After viewing the video, they completed the global IM perception and the perceived interview performance measure. We counterbalanced the order of these measures: half of participants rated IM first and then rated interview performance, whereas the second half rated interview performance first and then IM.

Measures. We created five items to measure global perceptions of the five IM tactics (i.e., self-promotion, image repair, image protection, slight and extensive image creation; see Appendix B). For instance, perceived extensive image creation was measured with the following item: “The applicant exaggerated or made up the content of his/her responses to improve his/her image” and/or “invented job experiences and past work achievements and/or pretended to possess competencies that he/she was actually lacking.” A five-point rating scale was used, where 1 = *completely disagree* and 5 = *completely agree*. In addition, interviewers completed the same seven-item perceived interview performance scale ($\alpha = .86$) measuring applicant evaluation as in Studies 2–4. Finally, gender, age, and education level were included as control variables in our analyses.

Results

We examined IM detection using the correlations between applicants' self-reported IM (i.e., number of times the tactic was used) and interviewers' global perceived use of this tactic for the five types of IM (Table 9). None of the correlations for the five types of IM tactics reached standard levels of significance. Applicants' self-reports and interviewers' perceptions tended to converge only for (honest) self-promotion ($r = .20$, $p = .06$). Correlations were lower and nonsignificant for deceptive tactics (r s ranging from $-.13$ to $.10$). These results provide further support for Hypothesis 1. They also suggest that correctly detecting IM tactics used by applicants is a difficult task for interviewers, both when using a global approach to IM detection at the end of the interview (in this study) and when using real-time IM detection (as in Studies 1–4).

We examined the relationship between interviewers' global perceptions of IM and their evaluations of applicant performance with linear regressions (see right side of Table 8). We first entered control variables (i.e., gender, age, education level, and the order in which interviewers

TABLE 9
Means, Standard Deviations, and Correlations Among Main Variables (Study 5)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	22.35	2.42														
2. Gender	1.51	.50	.03													
3. Education	1.38	.49	.42	.10												
4. Order	—	—	-.03	-.16	.04											
5. Applicant use of self-promotion	5.05	1.96	.23	-.06	.62	.00										
6. Applicant use of image repair	1.19	1.21	.17	-.20	-.14	-.02	-.12									
7. Applicant use of image protection	.73	.45	.19	-.07	.05	.01	-.12	.44								
8. Applicant use of slight image creation	3.48	1.58	.01	.02	.10	-.03	-.05	-.24	-.24							
9. Applicant use of ext. image creation	2.36	1.46	.06	-.03	.28	-.07	.47	-.57	-.29	.50						
10. Perceived self-promotion	3.77	.86	-.03	.09	.10	-.20	.20	.10	.30	.10	.22					
11. Perceived image repair	2.34	1.27	-.02	-.14	-.02	-.08	.15	.10	.04	-.04	.05	.06				
12. Perceived image protection	2.40	1.19	.11	-.07	-.07	-.10	.10	-.05	-.13	-.09	.11	-.13	.47			
13. Perceived slight image creation	2.37	1.10	-.04	-.09	-.05	-.12	.07	-.13	-.25	-.07	.17	-.07	.17	.43		
14. Perceived ext. image creation	1.61	.61	.19	-.31	.09	-.06	.10	-.02	-.08	-.11	.07	-.18	.31	.42	.42	
15. Applicant evaluation	3.14	.74	.03	-.13	.12	-.14	.25	.14	.32	.04	.28	.59	.05	-.10	.05	-.08

Note. $N = 70$ novice interviewers. Gender: 1 = male, 2 = female; level of education = 1 = bachelor, 2 = master; order: 1 = rate IM then interview performance; 2 = rate interview performance then IM. Numbers in bold represent convergence between applicant self-reported IM and interviewer perceived IM.

Values above .22 or below -.22 are significant at $p < .05$. Values above .30 or below -.30 are significant at $p < .01$.

completed IM and evaluation measures) in Model 1. In Model 2, we added applicants' actual use of IM tactics, explaining 24% of additional variance. Finally, in Model 3 we included interviewers' perceptions of IM tactics, explaining 16% of additional variance. Hypothesis testing was done on Model 3. Interviewers' perceptions of self-promotion were positively related to interview performance ratings ($b = 0.34$, $SE = .09$, $p < .01$), supporting Hypothesis 3a. Perceptions of image protection ($b = -0.07$, $SE = .07$, $p = .29$) and extensive image creation ($b = -0.07$, $SE = .08$, $p = .37$) were negatively (but not significantly) related to interview performance ratings. Perceptions of slight image creation were positively but not significantly related to performance ratings ($b = 0.13$, $SE = .07$, $p = .08$). These results suggest that the relationship between perceptions of honest IM and evaluations of performance are similar with global perceptions and real-time IM detection. On the other hand, the relationships between perceptions of deceptive IM and evaluations of performance (i.e., Hypotheses 3b and 3c) are less strong with global IM perceptions than with real-time IM detections (albeit mostly in the expected direction).

Discussion

Main Findings and Contribution to Personnel Selection Research

Five experimental studies examined interviewers' attempts to detect honest and deceptive IM tactics used by applicants and the impact of interviewer perceived IM on their evaluation of applicants. Our research contributes to IM, deception, and personnel selection research in several ways.

First, many researchers have called for research investigating interviewers' capacity to detect applicant IM (Levashina & Campion, 2006, 2007; Macan, 2009; Posthuma et al., 2002). Our studies address this call by examining detection of both honest and deceptive IM tactics in employment interviews with a controlled experimental design that allows precise measurement of detection accuracy. Our studies extend recent efforts to explore this issue with field studies (Roulin et al., 2014) or basic deception detection research (Reinhard et al., 2013). Our results suggest that, overall, interviewers' attempts to detect applicants' IM are rarely successful. Although above chance level, actual IM detection levels measured with real-time coding were very low. The average proportion of correctly detected IM tactics was 13% in Study 1, 20% in Study 2, 23% in Study 3, and 20% in Study 4. These results were confirmed with the low correlations between applicants' coded IM and interviewers' global

perceptions of IM in Study 5. As such, our results confirm that detecting IM during an interview is a difficult task, as suggested by IDT (Buller & Burgoon, 1996). Interviewers' difficulties to detect IM may come from a lack of training on deception detection (Fletcher, 1990) or failure to focus on the right cues (Van Iddekinge et al., 2005).

Second, we developed a novel experimental design with real-time coding of IM by both applicants and interviewers. This approach offers another perspective that complements findings using a global measure of IM at the end of interviews that was commonly used in past research. It allows precisely measuring various types of IM tactics, real-time occurrence, identification, and length of each IM tactic used by applicants during their interviews. At the same time, it allows creating more precise measures of IM detection than global convergence measures used in past research (e.g., Roulin et al., 2014; Stevens & Kristof, 1995).

Third, our results suggest that interviewers detect honest IM more accurately than deceptive IM, which corresponds to prior findings in deception detection (Bond & DePaulo, 2006; Levine et al., 1999). When detecting IM in real time (Studies 1–4), interviewers correctly detected on average between 11.8% and 18.5% of deceptive IM tactics and between 13.4% and 29.1% of honest IM tactics. These results are consistent with results from Study 5, showing higher correlations between self-reported and perceived global ratings of self-promotion than image protection and image creation tactics. Interviewers' difficulty in accurately detect deceptive IM may increase the chances of hiring less qualified applicants when they use undetected deceptive IM to make an impression of a qualified applicant. This complements past research suggesting that (a) organizations and interviewers are especially concerned with deceptive IM (Arthur et al., 2010; Stewart et al., 2010), (b) applicants are likely to use deceptive IM in interviews (Levashina & Campion, 2007; Weiss & Feldman, 2006), and (c) deceptive IM may attenuate the validity of the selection process (Marcus, 2006; Weiss & Feldman, 2006).

Fourth, our results suggest that interview question type affects IM detection in two ways. On the one hand, interviewers, and especially professional interviewers, were better at detecting IM tactics with situational than with past-behavior questions. On the other hand, interviewers produced more *false alarms* (i.e., applicants incorrectly perceived as engaging in IM) and thus had a reduced *correct rejection* rate with situational than with past-behavior questions. For instance, in Study 2, the predicted *correct detection* rate in situational interviews was more than twice as high as in past-behavior interviews. But the predicted *correct rejection* rate was also nearly two times lower. A closer look at the results suggests that *correct detection* of honest tactics was improved but *correct detection* of deceptive tactics was not influenced by question type. One explanation

for these results could be that the hypothetical nature of situational interviews leads interviewers to overestimate applicants' use of (deceptive) IM tactics. This relates to the notion of message receivers' suspicion in IDT (Buller & Burgoon, 1996), which should lead to more accurate detection. Although we did not measure suspicion directly in our studies, it is possible that interviewers were more suspicious due to the hypothetical nature of responses to situational questions, helping them to correctly detect IM. But they may have been overly suspicious, leading also to more *false alarms*. Moreover, although we did not find differences in deceptive IM detection between the two forms of interviews, future research may want to explore whether it is harder to deceive interviewers in past-behavior interviews, for instance because creating a believable answer is more cognitively complex for the applicant.

Fifth, experience does not improve IM detection. Years of experience in selection were not related to our detection indicators in Studies 1 and 2. Moreover, professional interviewers did not outperform novice interviewers at detecting IM in Study 3. These results are consistent with previous research on IM (Lievens & Peeters, 2008; Tsai et al., 2010) and deception (Reinhard et al., 2013; Vrij et al., 2010) but not with IDT (Buller & Burgoon, 1996). Interviewers may not benefit from their experience because they rarely receive feedback about their performance in interviews that they conduct (Dipboye, 1994). Lack of feedback may prevent them from improving their detection abilities over time. Experienced interviewers may also be overconfident in the expertise or intuitive skills they have accumulated through the years (Highhouse, 2002, 2008), preventing them from questioning their actual detection abilities (Robie et al., 2006).

Finally, interviewers' evaluations of applicant performance were related to their perceptions of applicant IM use, even after controlling for actual IM use. As expected, in all of our five studies, interviewers gave higher ratings to applicants when they perceived them as using self-promotion. Interviewers also tend to give lower ratings to applicants when they perceived them as using image protection and, to a lesser extent, image creation (although this effect was smaller in the last two studies, where IM was made less salient). As such, what interviewers see may matter more than what applicants actually do. Such results may also explain inconsistencies in past findings about the impact of self-reported IM on interview ratings (Levashina & Campion, 2007; Swider et al., 2011). The positive or negative impact of applicants' IM tactics may actually depend on interviewers' perceptions and detection of these tactics and the use of this information in their evaluation of applicants. Yet, though interviewers give lower evaluations to applicants perceived as deceptive, their

attempts may not be effective because only a small proportion of applicant deceptive IM is correctly detected.

Practical Implications

Many applicants engage in deceptive IM in the United States (Levashina & Campion, 2007), Europe, and China (König, Wong, & Cen, 2012). Moreover, Griffith, Chmielowski, and Yoshita (2007) showed that a company hiring half of applicants could hire up to 31% of people who falsified responses during the selection process. Therefore, interviewers' difficulty to correctly detect deceptive IM and their use of this information to evaluate applicants means that organizations run the risk of hiring less qualified but deceptive applicants instead of more qualified but honest ones. Organizations may thus benefit from developing training programs to highlight the issue of IM in interviews. Interviewers should be aware of existing types of IM tactics, their use by applicants, and that detecting IM is not an easy task. Increasing interviewers' awareness may make them more suspicious, which should increase detection (Bobko, Barelka, & Hirshfield, 2014).

Moreover, our results showed that some interviewers perform above chance level while trying to detect IM, whereas others perform below chance level. More precisely, 67% of interviewers were *above* chance level in Study 1, 60% in Study 2, 80% in Study 3, and 54% in Study 4. In contrast, 24% of interviewers were *below* chance level in Study 1, 37% in Study 2, 15% in Study 3, and 42% in Study 4. These variations in detection accuracy suggest that some interviewers may use strategies, such as using and interpreting the right cues while ignoring less appropriate cues, that make them better IM detectors than others. If future research can identify these strategies, and if these strategies can be taught to interviewers, this would create training opportunities that can have important implications for organizations. Past research has showed that training can help interviewers identify honest IM tactics (Howard & Ferris, 1996). Similarly, training programs could be developed to identify deceptive IM using the cues identified by deception detection research (DePaulo et al., 2003; Vrij et al., 2010) instead of stereotypical cues. For instance, police officers' deception detection improves when they focus on story-related cues (e.g., vagueness, contradictions) instead of nonverbal cues (e.g., gaze aversions, posture change, fidgeting; Mann et al., 2004). Training interviewers may thus involve encouraging them to pay more attention to the content of applicants' responses and less to their nonverbal behaviors. Given that experienced interviewers are not better than more novices, training programs should target all interviewers and not only the less experienced ones.

Limitations and Future Research Directions

This study has some limitations that future research should address. Sample sizes for studies 4 and 5 were small, and results should be replicated with larger samples. In Study 4, it is possible that interviewers may be committed to their performance evaluations, influencing their IM coding to reduce dissonance, or that a third variable, like a general impression, might drive both ratings. Yet, this would closely mirror what happens in actual interviews, where interviewers simultaneously form perceptions of applicant IM use and performance.

Our results are also based on videos of short interviews (approximately 5 minutes per applicant). Although research on “thin slices” suggests that interviewers can get an accurate picture of an applicant’s traits after only a few minutes of interaction (e.g., Schmid Mast, Bangerter, Bulliard, & Aerni, 2011), it is possible that IM detection may become more effective only after a longer period of interaction. Longer interviews may allow interviews to collect more instances of various IM tactics used by the applicant. Alternatively, longer interactions involve more information to process for interviewers and thus higher cognitive load, which may decrease detection accuracy (Buller & Burgoon, 1996). Future research could examine if interview length influences IM detection. Moreover, the fictive nature of our experiments may have limited interviewers’ motivation to detect IM. Future research should explore IM detection in real selection situations.

Future research might also examine if individual differences influence IM detection. For instance, we observed unexpected gender effects in Study 2, with better detection for male than female interviewers. But we did not find any difference between male and female interviewers in the other studies. We also did not find any effects of age or interview experience. Nevertheless, and although years of research on deception detection have not uncovered robust individual differences in deception detection (Bond & DePaulo, 2008), future research could further investigate this issue. The differences in IM detection among interviewers in this study suggest that such individual differences may exist (or that different interviewers use different IM detection strategies that are more or less effective). Similarly, future research could examine how background differences between the applicant and the interviewer (e.g., in gender, age, ethnicity, culture, personality) could affect detection.

Participants did not conduct the interviews but rather were observers of the video-recorded interviews. This design is similar to interviews that are conducted by interviewers in organizations, video recorded, and then passed on to managers who will rate applicants and make final decisions. However, IDT suggests that detection is more difficult when simultaneously managing a cognitively demanding task such as

conducting an interview. We thus believe that the detection capacity of interviewers who conduct interviews will be similar to, and perhaps lower than, individuals who merely observe interviews. Yet, more research on probing as a deception detection technique should be conducted. For instance, when conducting the interview, interviewers may have the opportunity to better detect deception by asking probe or follow-up questions.

Conclusion

Detecting honest and deceptive IM tactics used by applicants during employment interviews is a difficult task for interviewers. As a consequence, their attempts to modulate their evaluations of applicants they perceive to use deceptive IM may fail because of their inability to correctly identify when applicants actually engage in various IM tactics. Even professional interviewers with years of experience fail to outperform novice students at this task. We thus concur with researchers (Gilmore et al., 1999; Levashina & Campion, 2006; Marcus, 2006; Weiss & Feldman, 2006) who see applicant deceptive IM use in interviews as an issue that both organizations and future research should carefully consider.

REFERENCES

- Antonakis J, Bendahan S, Jacquart P, Lalive R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, *21*, 1086–1120. doi: 10.1016/j.leaqua.2010.10.010
- Arthur W, Glaze RM, Villado AJ, Taylor JE. (2010). The magnitude and extent of cheating and response distortion effects on unproctored internet-based tests of cognitive ability and personality. *International Journal of Selection and Assessment*, *18*, 1–16. doi: 10.1111/j.1468–2389.2010.00476.x
- Barrick MR, Mount MK. (1996). Effects of impression management and self-deception on the predictive validity of personality constructs. *Journal of Applied Psychology*, *81*, 261–272. doi: 10.1037/0021–9010.81.3.261
- Barrick MR, Shaffer JA, DeGrassi SW. (2009). What you see may not be what you get: Relationships among self-presentation tactics and ratings of interview and job performance. *Journal of Applied Psychology*, *94*, 1394–1411. doi: 10.1037/a0016532
- Bobko P, Bareika AJ, Hirshfield LM. (2014). The construct of state-level suspicion: A model and research agenda for automated and information technology (IT) contexts. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *56*, 489–508. doi: 10.1177/0018720813497052
- Bolino MC, Kacmar KM, Turnley WH, Gilstrap JB. (2008). A multi-level review of impression management motives and behaviors. *Journal of Management*, *34*, 1080–1109. doi: 10.1177/0149206308324325
- Bond CF, DePaulo BM. (2006). Accuracy of deception judgments. *Personality and Social Psychology Review*, *10*, 214–234. doi: 10.1207/s15327957pspr1003_2
- Bond CF, DePaulo BM. (2008). Individual differences in judging deception: Accuracy and bias. *Psychological Bulletin*, *134*, 477–492. doi: 10.1037/0033–2909.134.4.477
- Bozeman DP, Kacmar KM. (1997). A cybernetic model of impression management processes in organizations. *Organizational Behavior and Human Decision Processes*, *69*, 9–30. doi: 10.1006/obhd.1996.2669

- Buller DB, Burgoon JK. (1996). Interpersonal deception theory. *Communication Theory*, 6, 203–242. doi: 10.1111/j.1468-2885.1996.tb00127.x
- Campion MA, Palmer DK, Campion JE. (1997). A review of structure in the selection interview. *PERSONNEL PSYCHOLOGY*, 50, 655–702. doi: 10.1111/j.1744-6570.1997.tb00709.x
- Delery JE, Kacmar KM. (1998). The influence of applicant and interviewer characteristics on the use of impression management. *Journal of Applied Social Psychology*, 28, 1649–1669. doi: 10.1111/j.1559-1816.1998.tb01339.x
- DePaulo BM, Lindsay JJ, Malone BE, Muhlenbruck L, Charlton K, Cooper H. (2003). Cues to deception. *Psychological Bulletin*, 129, 74–118. doi: 10.1037/0033-2909.129.1.74
- DePaulo BM, Pfeifer RL. (1986). On-the-job experience and skill at detecting deception. *Journal of Applied Social Psychology*, 16, 249–267. doi: 10.1111/j.1559-1816.1986.tb01138.x
- Dipboye RL. (1994). Structured and unstructured selection interviews: Beyond the job-fit model. In Ferris GR (Ed.), *Research in personnel and human resources management* (Vol. 12, pp. 79–123). Greenwich, CT: JAI Press.
- Dunning D, Heath C, Suls JM. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5, 71–106. doi: 10.1111/j.1529-1006.2004.00018.x
- Ellis APJ, West BJ, Ryan AM, DeShon RP. (2002). The use of impression management tactics in structured interviews: A function of question type? *Journal of Applied Psychology*, 87, 1200–1208. doi: 10.1037/0021-9010.87.6.1200
- Fletcher C. (1990). The relationships between candidate personality, self-presentation strategies, and interviewer assessments in selection interviews: An empirical study. *Human Relations*, 43, 739–749. doi: 10.1177/001872679004300803
- Gilmore DC, Ferris GR. (1989). The effects of applicant impression management tactics on interviewer judgments. *Journal of Management*, 15, 557–564. doi: 10.1177/014920638901500405
- Gilmore DC, Stevens CK, Harrell-Cook G, Ferris GR. (1999). Impression management tactics. In Eder RW, Harris MM (Eds.), *The employment interview handbook* (pp. 321–336). Thousand Oaks, CA: Sage.
- Granhag PA, Strömwall LA. (2001). Deception detection based on repeated interrogations. *Legal and Criminological Psychology*, 6, 85–101. doi: 10.1348/135532501168217
- Green DM, Swets JA. (1966). *Signal detection theory and psychophysics*. Oxford, England: John Wiley.
- Griffith RL, Chmielowski T, Yoshita Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behaviour. *Personnel Review*, 36, 341–355. doi: 10.1108/00483480710731310
- Griffith RL, McDaniel M. (2006). The nature of deception and applicant faking behavior. In Griffith RL, Peterson MH (Eds.), *A closer examination of applicant faking behavior* (pp. 1–19). Greenwich, NC: Information Age Publishing.
- Griffith RL, Peterson MH, Isaacson J, Quist J, Gammon A. (2009, April). *One of these things is not like the other: A person specific taxonomy of the determinants of applicant responding*. Paper presented at the 24th Annual Conference for the Society for Industrial and Organizational Psychology, New Orleans, LA.
- Herriott SR, Levinthal D, March JG. (1985). Learning from experience in organizations. *American Economic Review*, 75, 298–302.
- Hertel G, Kerr NL, Messé LA. (2000). Motivation gains in performance groups: Paradigmatic and theoretical developments on the Köhler effect. *Journal of Personality and Social Psychology*, 79, 580–601. doi: 10.1037/0022-3514.79.4.580

- Highhouse S. (2002). Assessing the candidate as a whole: A historical and critical analysis of individual psychological assessment for personnel decision making. *PERSONNEL PSYCHOLOGY*, 55, 363–396. doi: 10.1111/j.1744-6570.2002.tb00114.x
- Highhouse S. (2008). Stubborn reliance on intuition and subjectivity in employee selection. *Industrial and Organizational Psychology*, 1, 333–342. doi: 10.1111/j.1754-9434.2008.00058.x
- Howard JL, Ferris GR. (1996). The employment interview context: Social and situational influences on interviewer decisions. *Journal of Applied Social Psychology*, 26, 112–136. doi: 10.1111/j.1559-1816.1996.tb01841.x
- Janz T. (1982). Initial comparisons of patterned behavior description interviews versus unstructured interviews. *Journal of Applied Psychology*, 67, 577–580. doi: 10.1037/0021-9010.67.5.577
- Kacmar KM, Delery JE, Ferris GR. (1992). Differential effectiveness of applicant impression management tactics on employment interview decisions. *Journal of Applied Social Psychology*, 22, 1250–1272. doi: 10.1111/j.1559-1816.1992.tb00949.x
- Kenny DA, Kashy D, Cook WL. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- Kleinmann M, Klehe UC. (2010). Selling oneself: Construct and criterion-related validity of impression management in structured interviews. *Human Performance*, 24, 29–46. doi: 10.1080/08959285.2010.530634
- König CJ, Hafsteinsson LG, Jansen A, Stadelmann EH. (2011). Applicants' self-presentational behavior across cultures: Less self-presentation in Switzerland and Iceland than in the United States. *International Journal of Selection and Assessment*, 19, 331–339. doi: 10.1111/j.1468-2389.2011.00562.x
- König CJ, Wong J, Cen G. (2012). How much do Chinese applicants fake? *International Journal of Selection and Assessment*, 20, 247–250. doi: 10.1111/j.1468-2389.2012.00596.x
- Krajewski HT, Goffin RD, McCarthy JM, Rothstein MG, Johnston N. (2006). Comparing the validity of structured interviews for managerial-level employees: Should we look to the past or focus on the future? *Journal of Occupational and Organizational Psychology*, 79, 411–432. doi: 10.1348/096317905'68790
- Kristof-Brown AL, Barrick MR, Franke M. (2002). Applicant impression management: Dispositional influences and consequences for recruiter perceptions of fit and similarity. *Journal of Management*, 28, 27–46. doi: 10.1177/014920630202800103
- Latham GP, Saari LM, Pursell ED, Campion MA. (1980). The situational interview. *Journal of Applied Psychology*, 64, 422–427. doi: 10.1037/0021-9010.65.4.422
- Latham GP, Sue-Chan C. (1999). A meta-analysis of the situational interview: An enumerative review of reasons for its validity. *Canadian Psychology*, 40, 56–67. doi: 10.1037/h0086826
- Leary MR, Kowalski RM. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin*, 107, 34–47. doi: 10.1037/0033-2909.107.1.34
- Levashina J, Campion MA. (2006). A model of faking likelihood in the employment interview. *International Journal of Selection and Assessment*, 14, 299–316. doi: 10.1111/j.1468-2389.2006.00353.x
- Levashina J, Campion MA. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology*, 92, 1638–1656. doi: 10.1037/0021-9010.92.6.1638
- Levashina J, Hartwell CJ, Morgeson FP, Campion MA. (2014). The structured employment interview: Narrative and quantitative review of the research literature. *PERSONNEL PSYCHOLOGY*, 67, 241–293. doi: 10.1111/peps.12052.

- Levine TR, McCornack SA. (2001). Behavioral adaptation, confidence, and heuristic-based explanations of the probing effect. *Human Communication Research*, 27, 471–502. doi: 10.1111/j.1468-2958.2001.tb00790.x
- Levine TR, Park HS, McCornack SA. (1999). Accuracy in detecting truths and lies: Documenting the “veracity effect.” *Communication Monographs*, 66, 125–144. doi: 10.1080/03637759909376468
- Lievens F, Peeters H. (2008). Interviewers’ sensitivity to impression management tactics in structured interviews. *European Journal of Psychological Assessment*, 24, 174–180. doi: 10.1027/1015-5759.24.3.174
- Louwerse MM, Dale R, Bard EG, Jeuniaux P. (2012). Behavior matching in multimodal communication is synchronized. *Cognitive Science*, 36, 1404–1426. doi: 10.1111/j.1551-6709.2012.01269.x
- Macan TH. (2009). The employment interview: A review of current studies and directions for future research. *Human Resource Management Review*, 19, 203–218. doi: 10.1016/j.hrmr.2009.03.006
- Mann S, Vrij A, Bull R. (2004). Detecting true lies: Police officers’ ability to detect suspects’ lies. *Journal of Applied Psychology*, 89, 137–149. doi: 10.1037/0021-9010.89.1.137
- Marcus B. (2006). Relationships between faking, validity, and decision criteria in personnel selection. *Psychology Science*, 48, 226–246.
- McFarland LA, Ryan AM, Kriska SD. (2003). Impression management use and effectiveness across assessment methods. *Journal of Management*, 29, 641–661. doi: 10.1016/S0149-2063_03_00030-8
- McFarland LA, Yun G, Harold CM, Viera LJ, Moore LG. (2005). An examination of impression management use and effectiveness across assessment center exercises: The role of competency demands. *PERSONNEL PSYCHOLOGY*, 58, 949–980. doi: 10.1111/j.1744-6570.2005.00374.x
- Millar MG, Millar KU. (1997). The effects of cognitive capacity and suspicion on truth bias. *Communication Research*, 24, 556–570. doi: 10.1177/009365097024005005
- Motowidlo SJ, Carter GW, Dunnette MD, Tippins N, Warner S, Burnett JR, Vaughan MJ. (1992). Studies of the structured behavioral interview. *Journal of Applied Psychology*, 77, 571–587. doi: 10.1037/0021-9010.77.5.571
- Mundlak Y. (1978). On the pooling of time series and cross section data. *Econometrica*, 46, 69–85. doi: 10.2307/1913646
- Noldus (2009). Noldus Observer™ XT 9.0. Wageningen, The Netherlands: Noldus Information Technology.
- Nordstrom CR, Hall RJ, Bartels LK. (1998). First impressions versus good impressions: The effect of self-regulation on interview evaluations. *The Journal of Psychology*, 132, 477–491. doi: 10.1080/00223989809599281
- Oliver J, Bakker AB, Demerouti E, De Jong RD. (2005). Projection of own on others’ job characteristics: Evidence for the false consensus effect in job characteristics information. *International Journal of Selection and Assessment*, 13, 63–74. doi: 10.1111/j.0965-075X.2005.00300.x
- Ones DS, Viswesvaran C. (1998). The effects of social desirability and faking on personality and integrity assessment for personnel selection. *Human Performance*, 11, 245–269. doi: 10.1080/08959285.1998.9668033
- Papke LE, Wooldridge JM. (1996). Econometric methods for fractional response variables with an application to 401(k) plan participation rates. *Journal of Applied Econometrics*, 11, 619–632. doi: 10.1002/(SICI)1099-1255(199611)11:6<619::AID-JAE418>3.0.CO;2-1
- Posthuma RA, Morgeson FP, Campion MA. (2002). Beyond employment interview validity: A comprehensive narrative review of recent research and trends over time. *PERSONNEL PSYCHOLOGY*, 55, 1–81. doi: 10.1111/j.1744-6570.2002.tb00103.x

- Ralston SM, Kirkwood WG. (1999). The trouble with applicant impression management. *Journal of Business and Technical Communication*, *13*, 190–207. doi: 10.1177/1050651999013002004
- Reinhard MA, Scharmach M, Müller P. (2013). It's not what you are, it's what you know: Experience, beliefs, and the detection of deception in employment interviews. *Journal of Applied Social Psychology*, *43*, 467–479. doi: 10.1111/j.1559-1816.2013.01011.x
- Robie C, Tuzinski KA, Bly PR. (2006). A survey of assessor beliefs and practices related to faking. *Journal of Managerial Psychology*, *21*, 669–681. doi: 10.1108/02683940610690204
- Roest A, Dubas JS, Gerris JR, Engels RC. (2009). Value similarities among fathers, mothers, and adolescents and the role of a cultural stereotype: Different measurement strategies reconsidered. *Journal of Research on Adolescence*, *19*, 812–833. doi: 10.1111/j.1532-7795.2009.00621.x
- Rosenfeld P. (1997). Impression management, fairness, and the employment interview. *Journal of Business Ethics*, *16*, 801–808. doi: 10.23/A:1017972627516
- Roulin N, Bangerter A, Levashina J. (2014). Interviewers' perceptions of impression management in employment interviews. *Journal of Managerial Psychology*, *29*, 141–163. doi: 10.1108/JMP-10-2012-0295
- Schmid Mast M, Bangerter A, Bulliard C, Aerni G. (2011). How accurate are recruiters' first impressions of applicants in employment interviews? *International Journal of Selection and Assessment*, *19*, 198–208. doi: 10.1111/j.1468-2389.2011.00547.x
- Schwarz N, Strack F, Mai HP. (1991). Assimilation and contrast effects in part-whole question sequences: A conversational logic analysis. *Public Opinion Quarterly*, *55*, 3–23. doi: 10.1086/269239
- Stanislaw H, Todorov N. (1999). Calculation of signal detection theory measures. *Behavior Research Methods*, *31*, 137–149. doi: 10.3758/BF03207704
- StataCorp (2011). Stata Statistical Software: Release 12. College Station, TX: StataCorp LP.
- Stevens CK, Kristof AL. (1995). Making the right impression: A field study of applicant impression management during job interviews. *Journal of Applied Psychology*, *80*, 587–606. doi: 10.1037/0021-9010.80.5.587
- Stewart GL, Darnold TC, Zimmerman RD, Parks L, Dustin SL. (2010). Exploring how response distortion of personality measures affects individuals. *Personality and Individual Differences*, *49*, 622–628. doi: 10.1016/j.paid.2010.05.035
- Strack F, Martin LL, Schwarz N. (1988). Priming and communication: Social determinants of information use in judgments of life satisfaction. *European Journal of Social Psychology*, *18*, 429–442. doi: 10.1002/ejsp.2420180505
- Swider BW, Barrick MR, Harris TB, Stoverink AC. (2011). Managing and creating an image in the interview: The role of interviewee initial impressions. *Journal of Applied Psychology*, *96*, 1275–1288. doi: 10.1037/a0024005
- Tross SA, Maurer TJ. (2008). The effect of coaching interviewees on subsequent interview performance in structured experience-based interviews. *Journal of Occupational and Organizational Psychology*, *81*, 589–605. doi: 10.1348/096317907248653
- Tsai WC, Chen CC, Chiu SF. (2005). Exploring boundaries of the effects of applicant impression management tactics in job interviews. *Journal of Management*, *31*, 108–125. doi: 10.1177/0149206304271384
- Tsai WC, Huang TC, Wu CY, Lo IH. (2010). Disentangling the effects of applicant defensive impression management tactics in job interviews. *International Journal of Selection and Assessment*, *18*, 131–140. doi: 10.1111/j.1468-2389.2010.00495.x
- Turnley WH, Bolino MC. (2001). Achieving desired images while avoiding undesired images: Exploring the role of self-monitoring in impression management. *Journal of Applied Psychology*, *86*, 351–360. doi: 10.1037/0021-9010.86.2.351

- Van Iddekinge CH, McFarland L, Raymark PH. (2007). Antecedents of impression management use and effectiveness in a structured interview. *Journal of Management*, 33, 752–773. doi: 10.1177/0149206307305563
- Van Iddekinge CH, Raymark PH, Roth PL. (2005). Assessing personality with a structured employment interview: Construct-related validity and susceptibility to response inflation. *Journal of Applied Psychology*, 90, 536–552. doi: 10.1037/0021-9010.90.3.536
- Vrij A, Granhag PA, Porter S. (2010). Pitfalls and opportunities in nonverbal and verbal lie detection. *Psychological Science in the Public Interest*, 11, 89–121. doi: 10.1177/1529100610390861
- Weiss B, Feldman RS. (2006). Looking good and lying to do it: Deception as an impression management strategy in job interviews. *Journal of Applied Social Psychology*, 36, 1070–1086. doi: 10.1111/j.0021-9029.2006.00055.x

APPENDIX A

Example of Indicator Calculation

Applicant number	Applicants IM coding			Interviewer IM coding		Classification
	Time start	Time stop	IM type	Time point	IM type	
Panel A						
1	71	93				Correct rejection
	93.86	106.91	SIC			Miss
	107.05	121.57	SP	113.69	SP	Correct detection
	123.57	137.06	IR			Miss
	138.08	142.78	SP	138.33	SP	Correct detection
	144.54	147.63	EIC	148.21	SP	Misattribution
	148	179				Correct rejection
	179.49	205.78	SP			Miss
	206.5	214.89	IP			Miss
	215	226				Correct rejection
	226	239.93	EIC	224.03	SP	Misattribution
	239	288				Correct rejection
	288.35	306.12	IR	295.58	IR	Correct detection
	306.79	309.44	SIC			Miss
	310	313				Correct rejection
313.78	318.12	SP	318.77	IP	Misattribution	
2	337.42	389.01	SP			Miss
	390.24	404.67	SIC			Miss
	405.7	413.34	SP			Miss
	414.56	435.01	SIC	428.22	SIC	Correct detection
	436.17	500.14	SP	465.52	SIC	Misattribution
	501.88	506.42	SIC	510.12	IP	Misattribution
	507	536				Correct rejection
	536.36	555.24	SP			Miss
	556	569				Correct rejection
	569.37	579.88	EIC			Miss

(continued)

APPENDIX A (continued)

Applicant number	Applicants IM coding			Interviewer IM coding		Classification
	Time start	Time stop	IM type	Time point	IM type	
3	581.7	619.75	SP	602.88	IR	Misattribution
	620	624				Correct rejection
	624.25	654.39	SIC			Miss
	655	672		662.48	IR	False alarm
	672.54	698.78	EIC			Miss
	698.71	712.44	SP	706.1	SP	Correct detection
	713	726				Correct rejection
	726.28	828.37	SP	789.48	IP	Misattribution
	850	854				Correct rejection
	854.32	857.83	EIC			Miss
	857	861				Correct rejection
	861.63	895.97	SP			Miss
	893.59	906.24	SIC	897.05	EIC	Misattribution
	902.64	906.81	EIC			Miss
	907	919				Correct rejection
	919.25	943.19	SIC			Miss
	921.02	1,005.33	EIC	946.56	EIC	Correct detection
	960.27	999.94	SP			Miss
	997.95	1,004.52	SIC	995.02	SIC	Correct detection
	1,005	1,025				Correct rejection
	1,025.64	1,073.01	EIC	1,066.34	SIC	Misattribution
	1,027.32	1,055.95	SIC			Miss
	1,056.36	1,072.04	SP			Miss
	1,074	1,077				Correct rejection
	1,077.3	1,087.52	SP			Miss
	1,080.89	1,150.07	EIC	1,096.24	EIC	Correct detection
	1,087.93	1,094.73	SIC			Miss
1,112.94	1,142.98	SP			Miss	
1,151	1,168				Correct rejection	
1,168.96	1,202	EIC	1,171.71	IP	Misattribution	
1,169.42	1,187.09	SIC			Miss	
1,187.36	1,201.9	SP			Miss	
4	1,223	1,277		1,319.02	SIC	Correct rejection
	1,277.04	1,296.82	SP			Miss
	1,297	1,307				Correct rejection
	1,307.07	1,313.5	SP			Miss
	1,313	1,328				Correct rejection
	1,328.02	1,336.14	SP			Miss
	1,336	1,399		1,346.77	SP	False alarm
	1,399.39	1,420.21	SP			Miss
	1,402.61	1,419.66	SIC	1,422.52	SIC	Correct detection
	1,424	1,502	SIC	1,467.14	IP	Misattribution

(continued)

APPENDIX A (continued)

Applicant	SP		IR		Total honest		IP		SIC		EIC		Total deceptive		Total IM		No IM		
	Nb	Nb	Nb	Nb	Nb	%	Nb	Nb	Nb	Nb	Nb	%	Nb	%	Nb	%	Nb	%	
Panel B																			
1	Correct detection	2	1	0	3	50	0	0	0	0	0	0	0	0	3	27	Correct rejection	5	100
	Misattribution	1	0	1	17	0	0	2	2	0	2	40	3	27	3	27	False alarm	0	00
	Miss	1	1	2	33	1	2	0	3	60	5	46	5	46	5	46		0	00
	Reported by applicant	4	2	6	6	1	2	2	5	11	11	11	11	11	11	11	Reported by applicant	5	80
2	Correct detection	1	0	1	14	0	1	0	1	17	2	15	2	15	2	15	Correct rejection	4	80
	Misattribution	3	0	3	43	0	1	0	1	17	4	31	4	31	4	31	False alarm	1	20
	Miss	3	0	3	43	0	2	2	4	66	7	54	7	54	7	54		1	20
	Reported by applicant	7	0	7	7	0	4	2	6	13	13	13	13	13	13	13	Reported by applicant	5	100
3	Correct detection	0	0	0	00	0	1	2	3	25	3	17	3	17	3	17	Correct rejection	6	100
	Misattribution	0	0	0	00	0	1	2	3	25	3	17	3	17	3	17	False alarm	0	0
	Miss	6	0	6	100	0	4	2	6	50	12	66	12	66	12	66		0	0
	Reported by applicant	6	0	6	6	0	6	6	12	18	18	66	18	66	18	66	Reported by applicant	6	100
4	Correct detection	0	0	0	00	0	1	0	1	50	1	17	1	17	1	17	Correct rejection	3	75
	Misattribution	0	0	0	00	0	1	0	1	50	1	17	1	17	1	17	False alarm	1	25
	Miss	4	0	4	100	0	0	0	2	00	4	66	4	66	4	66		1	25
	Reported by applicant	4	0	4	4	0	2	0	2	0	2	66	2	66	2	66	Reported by applicant	4	100
<i>Mean</i>	Correct detection			1	16				1.25	23	1.25	19	2.25	19	2.25	19	Correct rejection	4.5	85
	Misattribution			1	15				1.75	33	1.75	23	2.75	23	2.75	23	False alarm	.5	15
	Miss			3.75	69				3.25	44	3.25	44	7	58	7	58		4.5	85
	Reported by applicant			5.75					6.25		6.25		12		12		Reported by applicant	5	

Note. Bold numbers represent the obtained detection indicators that are used in the analyses presented in the paper. SP = self-promotion, IR = image repair, IP = image protection, SIC = slight image creation, EIC = extensive image creation.

APPENDIX B

List of Global IM Perception Items Used in Study 5

Self-promotion	The applicant honestly presented him/herself in a positive way and/or demonstrated that he/she actually possessed abilities and skills required for the job and/or highlighted past experienced and successes that he/she actually had.
Image repair	The applicant used excuses and justifications to defend his/her image of a good applicant and counter interviewers' questions or remarks and/or tried to convince the interviewer that he/she was not responsible for professional failures.
Image protection	The applicant protected his/her image by voluntarily omitting to mention negative details or events and/or by hiding them from the interviewer and/or distanced him/herself from past negative events.
Slight image creation	The applicant embellished the content of his/her responses by deforming, exaggerating, or combining professional experiences or skills in order to improve his/her image and appear a better fit with the job.
Extensive image creation	The applicant exaggerated or made up the content of his/her responses to improve his/her image and/or invented job experiences and past work achievements and/or pretended to possess competencies that he/she was actually lacking.
