Enhancing the Knowledge about Faking:

Ability, Motivation, and Beyond

Dissertation zur Erlangung des Grades eines

Doktors der Naturwissenschaften

Vorgelegt von **Michael Schilling**

Universität des Saarlandes

Saarbrücken, 2019

Dekan:	Univ.-Prof. Dr. Stefan Strohmeier
Berichterstatter 1:	Univ.-Prof. Dr. Cornelius J. König
Berichterstatter 2:	Univ.-Prof. Dr. Frank F. Spinath
Tag der Disputation:	03.12.2019

Hofstadter's Law:

It always takes longer than you expect,

even when you take into account Hofstadter's Law.

— (Quote from *Gödel, Escher, Bach: An Eternal Golden Braid* by Douglas Hofstadter, 1979)

DANKSAGUNG

Ohne den Support und die Hilfe einer Vielzahl ganz besonderer Menschen wäre diese Arbeit nicht vollendet worden. An dieser Stelle möchte ich mich für die Unterstützung, den Rückhalt und auch den emotionalen Beistand in den letzten Jahren herzlich bedanken.

Beginnen möchte ich bei meinem Betreuer Cornelius, der mir die Möglichkeit zur Promotion gegeben und mich immer in jeder erdenklichen Weise unterstützt hat. Unsere zahlreichen Gespräche, sein Input und sein Feedback haben mir erst den kritischen Zugang zur Forschung im Allgemeinen und zu meinem Thema im Besonderen ermöglicht. Vor allem hat Cornelius als Chef aber auch genau den richtigen Grad an Führung und Freiheit getroffen, den ich für meine persönliche und berufliche Entwicklung gebraucht habe. Für all dies ein herzliches Dankeschön.

Meine Kollegen haben meine Promotionszeit zu etwas ganz Besonderem gemacht. Allen voran mein Büromitbewohner Markus. Diese zwei Meter vier große Publikationsmaschine hat in den letzten Jahren nicht nur alle A&O Journals, sondern auch mein Herz erobert. Vielen Dank auch an Nida, den größten *Alman*, den ich kenne. Unsere Gespräche über Gott, Allah und die Welt waren nicht nur kurzweilig, sondern haben auch meine Gedanken in den letzten Jahren mitgeprägt. Großer Dank geht auch an Clara, die mich die Regeln der *Street-Cred* gelehrt hat und einen Teil des Promotionsweges mit mir gegangen ist. Nicht vergessen ist auch Clemens, der mit seiner Dissertation Grundlagen für meine Arbeit gelegt und mich zum ersten Mal in den Kontakt mit R gebracht hat. Dann ist da noch Manuela, die

mich als Betreuerin meiner Diplomarbeit an das wissenschaftliche Arbeiten herangeführt und dann wider Erwarten den Absprung in die freie Wirtschaft gewagt hat. Auch danken möchte ich Berit für ihre moralische Unterstützung und öfter mal was zum Schmunzeln, Rudi für sein unglaubliches statistisches und R Fachwissen, das er bereitwillig mit mir geteilt hat und Tina, die als Letztes ins Team gefunden, aber direkt jeden Scherz mitgemacht hat. Nicht vergessen möchte ich an dieser Stelle auch Doris, die heimliche Anführerin aller Sekretärinnen und gute Seele der A&O. Ohne ihre tatkräftige Hilfe wäre ich bestimmt schon wegen nicht oder falsch abgegebener Dienstreiseanträgen von der Unipolizei verhaftet worden. Euch allen von Herzen DANKE.

Mein weiterer Dank geht an die Co-Autoren der in dieser Arbeit zusammengefassten Studien, allen voran Nicolas Roulin und Nicolas Becker. Ohne ihre Hilfe und ihr Feedback hätte keines der drei Manuskripte die Qualität erreicht, die nun in dieser Arbeit zu lesen ist. In diesem Rahmen möchte ich mich auch bei allen Bachelor- und Master-Studierenden bedanken, die ihre Abschlussarbeit bei mir geschrieben und mich so bei meinem Promotionsprojekt unterstützt haben. Im gleichen Atemzug möchte ich auch Prof. Dr. Spinath für die Begutachtung dieser Arbeit als zweiter Berichterstatter sowie allen weiteren Mitgliedern der Promotionskommission danken.

Unsagbar dankbar bin ich meinen Eltern, die mich während meines ganzen bisherigen Lebens immer bedingungslos unterstützt haben. Mama und Papa, ihr wart immer für mich da und habt an mich geglaubt, egal was ich auch angestellt habe. Ohne euren Support wäre ich nie so weit gekommen und eure Erziehung hat mich zu dem Menschen gemacht, der ich heute bin. Für all dies bin ich euch so dankbar, dass ich es gar nicht in Worte fassen kann und ohne euch wäre diese Arbeit gewiss nicht geschrieben worden.

Der größte Dank geht an den wichtigsten Menschen in meinem Leben. Sarah, du hast mit mir in den letzten Jahren jede Höhe und Tiefe diese Promotionsvorhabens durchgestanden und warst immer für mich da. Du hast mich wiederaufgebaut, wenn ich am Boden gelegen habe

und hast mir eine neue Richtung gegeben, wenn ich gegen eine Wand gelaufen bin. Du warst verständnisvoll, wenn ich den Kopf in der Arbeit und kaum Zeit für unsere Beziehung hatte und hast mich raus vor die Tür gezerrt, wenn das für mich bitter nötig war. Dein Feedback und unzähliges Gegenlesen waren für mich unverzichtbar und alleine deinen übermenschlichen Microsoft Word Kenntnissen ist es zu verdanken, dass diese Arbeit zu einem Meisterwerk der Formatierungskunst geworden ist und nicht nur als Kaffee verschmierte Blättersammlung in einem Schnellhefter abgegeben wurde. Für all dies bin ich dir unglaublich dankbar und hoffe, dir in unserem weiteren gemeinsamen Leben auch eine solche emotionale und tatkräftige Unterstützung sein zu können.

ZUSAMMENFASSUNG

Werden Selbstauskunftsverfahren (z.B. Persönlichkeitstests oder Vorstellungsgespräche) zur Personalauswahl eingesetzt, besteht immer die Gefahr, dass Bewerber nicht ehrlich antworten, um ihre Auswahlchancen zu erhöhen. Dieses beabsichtigte Verzerren von Antworten, welches als Faking bezeichnet wird, kann einen konkreten Einfluss auf Auswahlentscheidungen haben und damit die Validität eignungsdiagnostischer Verfahren gefährden. Aufgrund dieser problematischen Auswirkungen, ist Faking bereits seit Jahrzehnten immer wieder im Fokus der Personalauswahlforschung. Allerdings bleiben bisher trotz umfangreicher theoretischer und empirischer Arbeiten in diesem Bereich noch einige Aspekte der Entstehung und Folgen von Faking ungeklärt. Ziel meiner Dissertation ist es, weiter zum Verständnis dieses hochrelevanten Phänomens der Personalauswahl beizutragen und zwei der aktuellen Themen dieses Forschungsbereichs zu untersuchen. Dazu konzentriere ich mich in einem ersten Schritt auf die seit Langem unbeantwortete Frage, ob kognitive Fähigkeiten eine wichtige Determinante von Faking sind. Die Ergebnisse meiner Meta-Analyse deuten darauf hin, dass kognitive Fähigkeiten tatsächlich eine entscheidende Rolle für erfolgreiches Faking von Persönlichkeitstests spielen. Erhebliche Unterschiede zwischen den Ergebnissen von Labor- und Feldstudien geben dabei aber auch Hinweise auf unterschiedliche zugrunde liegende Mechanismen in beiden Forschungskontexten. In einer zweiten Studie untersuche ich mit einem aus der sozialökologischen Psychologie entliehenen Ansatz die motivationalen Auswirkungen von Wettbewerb auf Bewerberfaking im Interviewkontext. Während in dieser Studie harte wirtschaftliche Indikatoren von Wettbewerb keine Effekte zeigen, sind sowohl die individuelle als auch die regional geteilte Einstellung bezüglich Wettbewerbes wichtige Prädiktoren für Faking. Wieder im Rahmen von Persönlichkeitstests bringe ich schließlich die beiden zuvor untersuchten Aspekte in einer umfangreichen Laborstudie mit drei großen Stichproben und unterschiedlichen Operationalisierungen der Variablen zusammen. Allerdings zeigt sich hier weder der erwartete Einfluss der kognitiven Fähigkeiten noch der Einstellung zu Wettbewerb

auf Faking. Vielmehr liefert diese Studie, wie auch schon die erste, Hinweise darauf, dass instruiertes Faking im Laborkontext von anderen mentalen und motivationalen Prozessen gesteuert wird als Faking in realen Auswahlsituationen. In ihrer Gesamtheit liefert meine Dissertation wichtige Erkenntnisse über den Motivations- und Fähigkeitsaspekt von Bewerberfaking, weist aber auch darauf hin, dass die Prozesse, die in den Köpfen der Bewerber ablaufen, komplexer und möglicherweise auch schwieriger im Labor reproduzierbar sind, als bisher angenommen. Entsprechend ruft meine Dissertation zu mehr Forschung über die konkreten mentalen Prozesse von Bewerbern in echten Auswahlsituationen auf und fordert eine kritische Auseinandersetzung mit der Nützlichkeit von Laborstudien für die Fakingforschung.

GENERAL ABSTRACT

The use of self-assessment tools (such as personality tests or job interviews) for personnel selection always carries the risk that in order to increase their chances of selection, applicants will not answer honestly. This intentional distortion of answers – known as faking – can have a significant impact on selection decisions and can jeopardize the validity of selection procedures. In recent decades, these highly problematic consequences of faking for organizations have regularly brought the phenomenon into scientific focus. However, despite extensive theoretical and empirical research in this area, there are still a number of unanswered questions regarding the emergence and consequences of faking. Therefore, the aim of my dissertation is to further contribute to the understanding of this highly relevant phenomenon inherent in personnel selection, by looking at two of the currently unresolved research issues in this area. In a first step, I focused on the long-unanswered question of whether cognitive abilities are an important determinant of faking behavior. The results of my meta-analysis suggest that cognitive abilities play a decisive role for successful applicant faking in personality tests. However, significant differences between the results of laboratory and field studies also revealed evidence of different underlying mechanisms in the two research contexts. In the second study, I used an approach from the field of socioecological psychology to examine the motivational effects of competition on applicants' faking in the interview context. While hard economic indicators of competition showed no effects, both the individual and the regionally shared attitudes towards competition emerged as important predictors of faking. Finally, I brought together the two previously studied aspects in a comprehensive laboratory study with three large samples and different operationalizations of the corresponding variables. However, the results did not support the expected effects of applicants' cognitive abilities or their attitudes towards competition. In fact, this study, like the first one, provided evidence that instructed faking in the laboratory environment is governed by slightly different mental and motivational processes than faking in real application situations. All things considered, my dissertation

provides important insights into both the motivational and the ability aspect of faking, but it also underlines that the processes occurring in applicants' minds may be more complex and possibly also more difficult to reproduce in the laboratory than previously assumed. Accordingly, my dissertation calls for more research on the concrete mental processes of applicants in real selection situations as well as for a critical debate about the usefulness of laboratory studies in faking research.

Index of Publications

This dissertation[1] is written in a publication-oriented style and comprises three studies which are in the process of publication. All three studies have been submitted to peer-reviewed journals and were given a "Revise & Resubmit Major Revision" from the reviewers and the editors. Study 2 has already been revised and resubmitted. Study 1 and 3 will be revised and resubmitted in the near future. This dissertation contains the most recent version of all three manuscripts (with slight changes in format to increase readability). Please cite the studies after publication in the corresponding journals.

Study 1: Schilling, M., Becker, N., Grabenhorst, M., & König, C. J. (2019). *The relationship between cognitive ability and personality scores in selection situations: A meta-analysis.* Manuscript submitted for publication to International Journal of Selection and Assessment.

Study 2: Schilling, M., Roulin, N., Obschonka, M., & König, C. J. (2019). *Do you fake more because of your neighbors? A multi-level study on regional and individual predictors of faking intentions across the U.S.* Manuscript submitted for publication to Journal of Selection and Assessment.

Study 3: Schilling, M., Sparfeldt, J. R., Becker, N., Engel, M., Levacher, J., Sebastian, T. F. P., Schäfer, J., & König, C. J. (2019). *Is it enough to be willing to win or do you have to be smart? The relationship between competitive worldviews, cognitive abilities, and applicant faking in personality tests.* Manuscript submitted for publication to International Journal of Selection and Assessment.

[1] The layout of this dissertation follows the model of Langer (2018). Reverences of the three studies are given right behind the corresponding study. The references of *General Introduction* and *General Discussion* are given at the end of this document.

TABLE OF CONTENTS

INDEX OF FIGURES

INDEX OF TABLES

CHAPTER I

GENERAL INTRODUCTION

For several decades, self-assessment tools such as job interviews or personality tests have been used in a wide variety of settings to make selection decisions (e.g., Macan, 2009; Mayfield, 1964; Morgeson et al., 2007; Spencer, 1938). The excellent test economy, the ability to predict work performance as well as other important aspects of work behavior, the incremental validity beyond that of performance tests, and the high acceptance by applicants have all rendered such selection procedures a fixed component of most personnel selection procedures (see: Schmidt & Hunter, 1998; Schmidt, Oh, & Shaffer, 2016; Truxillo, Bauer, McCarthy, Anderson, & Ahmed, 2017). However, despite all of these advantages, there is one aspect of such selection tools that raises concerns for both organizations and researchers. Since the results of personality tests or interviews are based solely on the responses and claims of the applicants themselves, there is nothing to prevent them from giving dishonest answers in order to improve their chances of being hired. In the context of personnel selection, such an intentional distortion of responses in self-assessment tools is known as faking, and may be one of the main reasons why procedures such as personality tests are not used even more frequently (Robie, Tuzinski, & Bly, 2006; Rynes, Brown, & Colbert, 2002).

Looking at the research results on this phenomenon, it becomes clear that the concerns of organizations are not completely unfounded. Faking can change the rank order of applicants and may therefore negatively affect selection decisions (Christiansen, Goffin, Johnston, & Rothstein, 1994; Donovan, Dwight, & Schneider, 2014; Griffith, Chmielowski, & Yoshita, 2007; Rosse, Stecher, Miller, & Levin, 1998). In addition, applicants' faking behavior can be also linked to undesirable behaviors at work, such as deviant work behavior (O'Neill et al., 2013) or low performance (Donovan et al., 2014). As such, faking may lead to significant economic disadvantages for organizations if the wrong people are selected, and may incur

further financial expense if the organizations decide to part with these wrong appointments. Given the high practical relevance of the issue, the phenomenon of faking has repeatedly moved into the focus of attention of selection research (e.g., Morgeson et al., 2007; Ruch, 1942; Spencer, 1938). A variety of theoretical models and empirical studies have attempted to explain the emergence of faking behavior and to offer feasible ways to counteract the phenomenon (e.g., Holden & Book, 2009; Levashina & Campion, 2006; Roulin, Krings, & Binggeli, 2016). These long-standing research efforts have already provided a very detailed picture of the underlying interpersonal predictors of faking and of the impact of the format and characteristics of specific selection instruments.

However, many specific aspects of this phenomenon remain unclear (e.g., the influence of cognitive abilities on faking), while on the other hand, most recent research findings provide new perspectives on the subject of faking (e.g., theories emphasizing the influence of competition). The general goal of my dissertation is to address some major deficits of current faking research in order to contribute to the understanding of this highly relevant phenomenon of personnel selection. Accordingly, the first study focused on the long-unanswered question of whether cognitive abilities are an important determinant of faking behavior, and consolidated previous research results from the area of personality tests in a large-scale meta-analysis. In turn, the second study used an approach from socioecological psychology to examine both individual and regional effects of competition on applicants' faking motivation in job interviews. In the context of the personality test again, the third study brought together both of the previously studied aspects and analyzed the effects of their mutual interplay on faking.

In the following sections, I provide an overview of the current state of faking research and identify deficits of previous studies. Next, I introduce the two major research issues that I will address with my dissertation and then link them to the three subsequently presented studies.

CHAPTER II

GENERAL THEORETICAL BACKGROUND

Current State of Research

For more than half a century, personnel selection researchers have been trying to understand applicant faking in self-assessment tools and searching for ways to combat this phenomenon (see Zickar and Gibby 2006, for a historical overview in the area of personality tests). Nowadays, it is well established that applicants can achieve better scores and ratings by faking in a variety of selection tools, such as personality tests (e.g., Griffith et al., 2007; Tett, Freund, Christiansen, Fox, & Coaster, 2012), bio data forms (e.g., Becker & Colquitt, 1992; Levashina et al., 2009), interest tests (e.g., Abrahams, Neumann, & Githens, 1971; Garry, 1953), emotional intelligence measures (e.g., Day & Carroll, 2008; Tett et al., 2012) and job interviews (e.g., Buehl & Melchers, 2017; Levashina & Campion, 2007). In this respect, faking is not only a theoretical problem but also quite common in real selection settings: Corresponding research has shown, for instance, that up to 81 to 99 per cent of all applicants use faking in job interviews to improve their chances of being hired (e.g., Levashina & Campion, 2007; Weiss & Feldman, 2006).

However, much more problematic than this high base rate are the individual differences in faking behavior between applicants (e.g., König, Hafsteinsson, Jansen, & Stadelmann, 2011; Raymark & Tafero, 2009). Some applicants fake more and others less: Precisely these differences may lead to a change in the rank order of applicants and may therefore negatively affect selection decisions (Christiansen et al., 1994; Donovan et al., 2014; Rosse et al., 1998). As a result, faking represents a potential threat to the reliability (MacCann, 2013) and validity (e.g., Marcus, 2006; Rosse et al., 1998) of various selection tools. To explain these individual differences in faking behavior, a number of different faking theories have been developed over time. These include theoretical models that only refer to a certain type of selection tool (e.g.

job interviews: Levashina & Campion, 2006), but also more general models that try to explain faking across different procedures (McFarland & Ryan, 2000; Roulin et al., 2016). Likewise, the models differ in whether they present a distinct view on individual selection situations (Griffith, Lee, Peterson, & Zickar, 2011) or whether they also reflect the dynamics of the job search, which on the part of the applicant, may also include applying to different organizations (Marcus, 2009).

In addition, various potential antecedents of faking, such as applicants' personality, attitudes, and personal life situations (e.g. the financial pressure to get the job: McFarland & Ryan, 2000) are discussed, and even the basic psychological ideas behind the various models may differ (Valence-Instrumentality-Expectancy theory: Ellingson & McFarland, 2011; Theory of Planned Behavior: McFarland & Ryan, 2006). Despite all of these differences between the models, most faking theories attribute the differences in applicants' faking to two basic aspects in particular (e.g., Ellingson & McFarland, 2011; Marcus, 2009; McFarland & Ryan, 2006; Snell, Sydell, & Lueke, 1999): (a) applicants' motivation to present themselves in a highly favorable way in order to improve their chances within the selection process, and (b) the abilities needed to distort the answers in the required direction.

Regarding this first, motivational aspect of faking, empirical studies have already demonstrated the influence of applicants' attitudes and characteristics as well as various aspects of the specific selection situation. For instance, several studies demonstrated that conscientiousness, which goes hand in hand with rule conformity and a sense of responsibility and diligence (McCrae & Costa, 1989; Roberts, Lejuez, Krueger, Richards, & Hill, 2014), is negatively related to faking in various selection tools (e.g., Buehl & Melchers, 2017; Lester, Anglim, & Fullarton, 2015; Mueller-Hanson, Heggestad, & Thornton, 2006; Roulin & Krings, 2016). Agreeableness, which is associated with interpersonal trust and cooperativeness in individuals (Graziano & Eisenberg, 1997), leads to an unwillingness to violate social norms, and was also found to be negatively related to faking behavior (Paulhus & John, 1998). On the

other hand, extraversion was found to be positively correlated with faking (Weiss & Feldman, 2006), which is consistent with results regarding overclaiming (Bing, Kluemper, Davison, Taylor, & Novicevic, 2011) academic dishonesty (Anderman & Danner, 2008) and general lying (Kashy & DePaulo, 1996). Further negative correlations were found with integrity (Griffith, Malm, English, Yoshita, & Gujar, 2006; McFarland & Ryan, 2000) and the related personality construct of honesty/humility (Buehl & Melchers, 2017), both of which are, by definition, associated with sincerity, modesty and fairness (Ashton & Lee, 2009; Lee & Ashton, 2004) and thus contradict faking in selection contexts. Further studies revealed that applicants' attitudes towards faking, i.e. the extent to which a person has a positive or negative view of faking, also have a significant influence on the faking itself (McFarland & Ryan, 2006). Studies that looked at the characteristics of the selection situation revealed a direct effect of the perceived attractiveness of the job (Buehl & Melchers, 2018; Dunlop, Telford, & Morrison, 2012) as well as of the risk of being caught out (Vasilopoulos, Cucina, & McElreath, 2005) on applicants' faking motivation and faking behavior.

With regard to the ability aspect of faking, the empirical findings are not quite as comprehensive. In this area, some studies have focused on applicants' social skills, i.e. their ability to react sensitively to the communication of others and at the same time to communicate in a controlled and expressive way (Riggio, 1986). These studies argued that social skills help applicants to understand and act on social cues in selection situations, which in turn leads to the observed correlations with faking (Hogan, Barrett, & Hogan, 2007). Another line of research in this area concentrates more on the analytical tasks which are essential for successful faking. From this perspective, König et al. (2006) argued that applicants need to analyze which characteristics are particularly important to a hiring organization in order to subsequently show self-benefitting behavior – a task for which, for instance, an applicant's ability to identify the (selection) criteria (ATIC) is a key factor. Subsequent research on ATIC has shown a direct effect on faking in various selection contexts (Klehe et al., 2012; König, Melchers, Kleinmann,

Richter, & Klehe, 2007). Besides these approaches dealing with quite specific abilities that are important for faking, applicants' cognitive abilities are the most commonly studied construct regarding this aspect of faking. Several faking theories assume that cognitive abilities in general are helpful to convert faking motivation into successful faking behavior (e.g., Marcus, 2009; Snell et al., 1999; Tett & Simonet, 2011). However, previous empirical results are inconclusive: While a substantial proportion of studies did find a corresponding correlation between applicants' cognitive abilities and their faking behavior (e.g., Grubb & McDaniel, 2007; Levashina, Weekley, Roulin, & Hauck, 2014; Pauls & Crost, 2005), others did not (e.g., Furnham, Taylor, & Chamorro-Premuzic, 2008; Levashina et al., 2009; Mudgett, 2000).

Research Deficits

Although the research results presented in the previous sections reflect only a small fraction of the current state of knowledge, they demonstrate that the longstanding research efforts in this area have already provided a very detailed picture of the underlying drivers and consequences of faking. However, as the last point of the above overview reveals, there are still many specific aspects of this phenomenon that remain unclear. In addition, some quite new and interesting theoretical ideas have recently emerged, which leave the beaten track of traditional faking models and focus mainly on distinct characteristics of the applicants and the selection situations. With this in mind, I would like to highlight two major open research issues which I consider to be particularly relevant for the further understanding of this phenomenon.

First, the aforementioned ambiguity of the empirical results regarding the relationship between cognitive abilities and faking poses a challenge to one of the basic assumptions of many faking theories. After all, it is self-evident that more intelligent applicants should have advantages in reading the demands of a selection situation and then behave accordingly. Furthermore, the two previously mentioned *narrower* aspects of faking abilities – social skills and ATIC – are substantially related to cognitive abilities (Kleinmann et al., 2011; Van Rooy

& Viswesvaran, 2004), and many authors do not consider them – at least in the case of social skills – to be independent from cognitive abilities even on a theoretical level (Mayer, Caruso, & Salovey, 1999). However, contrary to these theoretical arguments, empirical studies have been unable to provide coherent evidence for a relationship between faking and cognitive abilities. In fact, even the studies that did find a respective correlation arrived at very different results with respect to its magnitude: The correlations vary between a high $r \geq .5$ (e.g., Underhill, Bearden, & Chen, 2008), a medium-sized $r \sim .3$ (e.g., Klehe et al., 2012; Pauls & Crost, 2005) and a small $r \leq .1$ (e.g., Wrensen & Biderman, 2005). At the same time, a potential generalization of corresponding findings is rendered considerably difficult by the diversity of previous studies in terms of their design (field vs. laboratory) or the operationalization of faking (for an overview of different operationalizations of faking, see Burns & Christiansen, 2011). Thus, the question of the extent to which cognitive abilities are relevant for faking remains open, whereas an answer to this question might help to provide a better understanding of the phenomenon of faking. This question becomes even more relevant as some authors suggest that part of the criterion validity of self-assessment tools may be attributed to the fact that the abilities necessary for faking, e.g. cognitive abilities, are also of great relevance in today's working world (e.g., Johnson & Hogan, 2006; Kleinmann et al., 2011). Therefore, in my opinion, a systematic analysis of the relationship between cognitive abilities and faking might be the key to this critical deficit in faking research.

Second, besides these rather traditional questions in faking research, recent theoretical ideas have opened up completely new perspectives on the subject of faking. A particularly promising approach focuses on the dynamics of selection processes and in particular on different forms of competition that may affect applicants' behavior. In this respect, the dynamic model of applicant faking by Roulin et al. (2016) assumes that applicants' faking behavior is (partly) an adaptive response to the fact that they are in direct competition with other applicants for jobs within a labor market governed by the laws of the market. In this sense, competitive

pressure in the labor market, and to an even greater extent applicants' perception and attitudes towards this competition, should be a critical determinant of their faking motivation. The corresponding research has mainly focused on the effect of the person-level variable competitive worldviews on faking motivation and subsequent faking behavior. In this context, competitive worldviews describe how people perceive the world with regard to competition: People with high competitive worldviews see the world as a "competitive jungle characterized by a ruthless, amoral struggle for resources and power in which might is right and winning everything" (Duckitt, Wagner, du Plessis, & Birum, 2002, p. 92). In line with the ideas of the dynamic model of applicant faking, first empirical studies have shown substantial correlations between competitive worldviews and faking intention as well as resulting faking behavior in the context of job interviews (Bourdage, Roulin, & Tarraf, 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016). But what is still missing in this context is a transfer of these promising results to other selection instruments and, even more importantly, an integration of situational and objective factors of competition. In fact, even before Roulin et al. (2016), several researchers (e.g., Bangerter, Roulin, & König, 2012; McFarland & Ryan, 2000; Snell et al., 1999; Tett & Simonet, 2011) assumed that labor market indicators and economic factors should affect applicants' faking motivation, as these variables also determine the chances of finding a job. However, the corresponding empirical results are mixed, and focus mainly on national unemployment rates (e.g., Fell & König, 2016; Fell, König, & Kammerhoff, 2016; König et al., 2011; Thackray, Tryba, & Griffith, 2013). This is particularly problematic since these objective aspects of competition differ greatly both regionally and temporally, meaning that a lack of knowledge about their influence may also lead to a bias in other areas of faking research (e.g., when data collection takes place during a time of economic crisis). Taking all of this together, a holistic view on the effects of competition could bring the whole field of faking research forward.

Finally, I would like to discuss another aspect that has received rather little attention from faking research so far – the mutual interplay between motivational and ability aspects of faking. In recent years, many studies have looked at either motivational or ability variables in isolation from each other as potential drivers of faking behavior (see section: *Current state of research*). From the applicants' perspective, successful faking requires not only the motivation to present oneself in a highly favorable way, but also the ability to behave and answer accordingly. Although such a moderating effect is a fundamental element of most current faking theories (Ellingson & McFarland, 2011; Goffin & Boyd, 2009; McFarland & Ryan, 2006; Roulin et al., 2016), it has rarely been empirically studied (exceptions: e.g., Vasilopoulos et al., 2005). This is particularly problematic given that when filling a vacancy, the applicants always come with different personal backgrounds, personalities and specific abilities. Without taking into account both major types of influencing factors and their interaction, the transferability of the research results to the practice of personnel selection is questionable.

In summary, there are not only two concrete research deficits in faking research, but also a lack of a holistic and integrative studies. Correspondingly, there is the potential to drive forward the research on this practically relevant phenomenon of personnel selection.

Research Goals and Dissertation Outline

The aim of my dissertation is to answer both traditional and new open questions of faking research and thus close previous gaps in this scientific field. In this spirit, I will address two major issues: First, I will focus on the long-unresolved question of whether cognitive abilities are an important determinant of faking ability and hence also faking behavior. Second, I will draw attention to the motivational effects of competition on applicant faking. Furthermore, I will examine these two major influencing factors together against the background of one of the basic assumptions of many faking theories – the dualism of faking

motivation and ability. In the following, I will describe the three studies that have been developed to study these specific aspects of faking.

Study 1 is devoted exclusively to the ability aspect of faking. Here, I focus on the relationship between cognitive ability and faking in personality tests using a meta-analytical approach. Following the assumption of many faking theories that cognitive ability is important for faking, I compare corresponding correlations with personality scores between selection situations and non-selection situations. The meta-analytical calculations are based on an extensive data set of published studies as well as grey literature from the last 50 years of faking research and are analyzed following the methods of Schmidt and Hunter (2004). Besides the general question of whether cognitive abilities can influence applicant faking, I look into moderating effects regarding the study design (laboratory vs. field), the response format of the personality test, and the type of cognitive ability test.

Study 2 turns to the motivational aspect of faking and looks at the effects of competition, and the perception thereof, on faking intention in job interviews. Inspired by theoretical arguments (e.g., from socioecological psychology) and cross-cultural studies, I hypothesize that in addition to individual-level predictors, there are also regional (within a country) differences in faking intentions and systematic links to regional-level features. Accordingly, I test and compare individual- and regional-level predictors of applicant faking intentions across the largest 50 Metropolitan Statistical Areas of the U.S. using multi-level techniques. In particular, I focus on the influence of hard regional economic indicators as well as the individual attitude towards competition (especially competitive worldviews) but also on shared attitudes and worldviews in a region.

Study 3 builds upon the findings of the two previous studies and assesses the interplay between motivational and ability aspects of applicant faking in personality tests. According to the current consensus of faking theories, applicants' abilities – especially their cognitive ability – should influence whether the motivation to fake, triggered by individual attitudes towards

competition (especially competitive worldviews), can be turned into successful faking behavior. This study uses a within-subject faking design – a design widely used in current faking research – to test the interaction of the two factors in three independent laboratory samples. In this regard, the individual samples not only cover three relevant subgroups in which personality tests are increasingly used as a selection tool, but also make use of different operationalizations of the corresponding variables.

In sum, these three studies of my dissertation provide a complementary and holistic view of previously unclear or neglected aspects of faking, from which both subsequent research and concrete personnel selection can greatly benefit.

CHAPTER III

THE RELATIONSHIP BETWEEN COGNITIVE ABILITY AND PERSONALITY SCORES IN SELECTION SITUATIONS: A META-ANALYSIS

Abstract

Several faking theories have identified applicants' cognitive ability (CA) as a determinant of faking – the intentional distortion of answers by candidates – but the corresponding empirical findings in the area of personality tests are often ambiguous. Following the assumption that CA is important for faking, we expected applicants with high CA to show higher personality scores in selection situations, leading in this case to significant correlations between CA and Big Five personality scores, but not in non-selection situations. This meta-analysis (66 studies, $k = 115$ individual samples, $N = 46{,}265$) showed this pattern of results as well as moderation effects for the study design (laboratory vs. field), the response format of the personality test, and the type of CA test.

Introduction

Faking – the intentional distortion of answers by applicants – is a frequently occurring phenomenon found when personality tests are used for personnel selection (e.g., Anglim, Bozic, Little, & Lievens, 2018; Birkeland, Manson, Kisamore, Brannick, & Smith, 2006; Galić, Jerneić, & Kovačić, 2012; Griffin & Wilson, 2012). In this context, interindividual differences in faking behavior are particularly problematic, as they can affect the applicants' rank order and thus the validity of selection decisions (König, Hafsteinsson, Jansen, & Stadelmann, 2011; McFarland & Ryan, 2000; Mueller-Hanson, Heggestad, & Thornton, 2006; Raymark & Tafero, 2009). The majority of faking theories attribute these differences in applicants' faking to two factors in particular (Ellingson & McFarland, 2011; Marcus, 2009; McFarland & Ryan, 2006; Snell, Sydell, & Lueke, 1999): (a) applicants' motivation to present themselves in a highly favorable way in order to improve their chances within the selection process, and (b) the abilities needed to distort the answers in the required direction.

Regarding the abilities aspect, some authors (e.g., Johnson & Hogan, 2006; Kleinmann et al., 2011) even suggested that part of the criterion validity of personality tests may be attributed to the fact that such abilities necessary for faking are also of great relevance in today's working world. In line with this argument, several theoretical models have identified applicants' cognitive ability as a crucial determinant of the occurrence and magnitude of faking behavior (e.g., Marcus, 2009; Snell et al., 1999; Tett & Simonet, 2011). However, previous empirical results are inconclusive: While a substantial proportion of studies did find a corresponding effect (Grubb & McDaniel, 2007; Levashina, Weekley, Roulin, & Hauck, 2014; Pauls & Crost, 2005), others did not (Furnham, Taylor, & Chamorro-Premuzic, 2008; Levashina, Morgeson, & Campion, 2009; Mudgett, 2000). Thus, the question of the extent to which cognitive ability is relevant for faking remains open, and an answer to this question would help to provide a better understanding of the phenomenon of faking and its consequences for the construct and criterion validity of personality tests.

The goal of the current study is therefore to provide aggregated results concerning the relationship of participants' cognitive ability and their faking in personality tests during selection situations in the form of a meta-analysis. Our meta-analysis focused on the correlation between cognitive ability and personality scores. We compared this correlation between selection samples and non-selection samples, because it can be found in different kinds of studies, irrespective of whether they were conducted in the laboratory or in the field or how they operationalized faking. In the following, we explain how the relationship between cognitive ability and faking should affect corresponding correlations, and we introduce possible moderating variables in this context.

Theoretical Background

Personality Tests in Selection and Cognitive Ability

The majority of faking theories agree that successful faking requires not only the motivation to present oneself in a highly favorable way, but also the ability to behave and answer appropriately (Levashina et al., 2009; Marcus, 2009; Mueller-Hanson et al., 2006; Roulin, Krings, & Binggeli, 2016; Snell et al., 1999). Applicants, for instance, have to identify the criteria on which they are being assessed in order to subsequently show self-benefitting behavior (Kleinmann et al., 2011; König, Melchers, Kleinmann, Richter, & Klehe, 2006). In the case of personality tests in particular, applicants may be able to identify the personality dimensions underlying the items in the questionnaire as well as judge the corresponding importance for the open position and the hiring organization (Klehe et al., 2012). Applicants with higher cognitive ability should handle this mainly analytical task more easily, which may in turn lead to more faking behavior among these applicants (Tett & Simonet, 2011).

However, when empirically analyzing the relationship between applicants' cognitive ability and their faking in personality tests in the form of a meta-analysis, the diversity of previous studies poses a particular challenge. For instance, different study designs were used,

among them many field studies which examined faking only at a group level, thus not allowing for the calculation of individual-level correlations (e.g., MacKenzie, Ployhart, Weekley, & Ehlers, 2010). Even in the case of similar study designs, for instance only within-person laboratory studies, the operationalizations of faking can differ substantially (for an overview of different operationalizations of faking, see Burns & Christiansen, 2011), rendering it difficult to aggregate results between studies with a similar design. In order to avoid these problems, our analysis is based on what, we believe, is the most basic indicator of the corresponding relationship: the direct correlation between applicants' cognitive ability and their personality scores in selection situations. Therefore, we will compare our results with those from samples in which the personality test was not completed under the pressure of a selection situation (abbreviated as non-selection samples) in order to evaluate the relationship between cognitive ability and faking. Previous meta-analyses without a focus on selection situations showed no, or rather low, correlations between cognitive ability and personality scores (Lange, 2013; Poropat, 2009)[2]. Assuming that applicants with higher cognitive ability are more successful at faking (e.g., Marcus, 2009; McFarland & Ryan, 2006; Snell et al., 1999) and that successful faking usually leads to higher scores on personality tests, we expect to find higher correlations between cognitive ability and personality scores in selection samples than in non-selection samples.

H_1: Correlations between cognitive ability and personality scores are higher in selection samples than in non-selection samples.

Based on the diversity of faking research, there is much to suggest that the relationship between cognitive ability and personality also varies systematically. In the following sections, we introduce three moderators, which address the diversity of study designs, differences in the personality tests used, and differences in the type of cognitive ability tests employed.

[2] We are very grateful that Arthur Poropat provided us with the previously unpublished results on the relationship between personality and cognitive ability, which were part of his meta-analysis regarding the relationship between personality and academic performance (Poropat, 2009).

Moderator Hypotheses

Study design (laboratory vs. field). In general, most studies in the area of faking research can be assigned to two categories (Birkeland et al., 2006): (a) studies conducted in the field, with real applicants in actual selection situations and (b) studies conducted in the laboratory with participants who are put in a simulated selection situation or who are instructed to fake. Previous meta-analyses about faking in field and laboratory studies found significantly higher faking effects in laboratory than in field studies (Birkeland et al., 2006; Hooper, 2007). Regarding this difference, some authors have argued that the processes underlying faking likely differ between the two types of studies (Ones, Viswesvaran, & Reiss, 1996): In field studies, the applicants' motivation to fake depends on many individual factors, including subjective considerations and situational circumstances. In laboratory studies, the faking motivation arises rather from the concrete instruction or from the cover story that is used to induce the application situation; this should lead to a similarly high faking motivation for all participants, which in turn may lead to individual differences in the ability to convert this motivation into faking behavior becoming more evident. In this line, we therefore expect higher correlations between cognitive ability and personality scores in laboratory studies than in field studies.

H_2: Correlations between cognitive ability and personality scores are higher in laboratory studies than in field settings.

Type of personality test. There are two main types of personality tests used in personnel selection (Vasilopoulos, Cucina, Dyomina, Morewitz, & Reilly, 2006): (a) forced-choice personality tests, in which participants have to choose between statements representing different personality dimensions for each single item, and (b) single-stimulus personality tests, in which each item belongs to one personality dimension, for which the participants have to express their rejection or approval or something in between. Forced-choice tests are often considered as more robust against faking (Martin, Bowen, & Hunt, 2002), mainly because it should be more difficult to answer in a socially desirable manner if one item includes two

equally desirable dimensions (Vasilopoulos et al., 2006). In this case, applicants who are motivated to fake are faced with the task of determining which of the corresponding dimensions is most relevant for a future employer. This analytical task is difficult because in contrast to the single-stimulus personality tests, the social desirability of the items provides the applicants with fewer hints for successful faking. Given this increased difficulty with regard to faking in forced-choice personality tests, cognitive ability should be even more important when this type of test is used. Therefore, we expect higher correlations between cognitive ability and personality scores in samples completing forced-choice tests than in samples completing single-stimulus tests.

H_3: Correlations between cognitive ability and personality scores are higher in studies employing forced-choice personality tests than in studies employing single-stimulus personality tests.

Type of cognitive ability test. The type of cognitive ability test is also a potential moderator of the correlation between cognitive ability and personality scores. Previous studies showed higher correlations between verbal cognitive ability and faking than between non-verbal cognitive ability and faking (Grieve & Mahar, 2010; MacCann, 2013). The authors of these studies argued that a deeper understanding of the items is beneficial for effective faking, which underlines the importance of verbal cognitive ability. Following MacCann (2013) as well as Grieve and Mahar (2010), we thus expect higher correlations in samples completing verbal cognitive ability tests than in samples completing non-verbal cognitive ability tests.

H_4: Correlations between cognitive ability and personality scores are higher if cognitive ability is measured with verbal than with non-verbal cognitive ability tests.

Studies that cannot be classified into one of the aforementioned categories will be summarized in a *mixed* category. We have no further hypotheses regarding this mixed category.

Methods

Literature Search

Four strategies were used to identify studies for this meta-analysis: (a) We conducted an extensive literature search using the databases Scopus, Science Direct, PsycINFO, PsychARTICLES, ERIC, EconLit, PSYNDEX, MEDLINE, Web of Science, and Pro Quest Dissertations and Theses Database. Search queries were constructed from four lists containing broad search terms for cognitive ability (tests), personality (tests), selection, and faking (see Table III.1 for full lists) and were carried out in English and German. The literature search was

Table III.1
English Search Terms

Cognitive ability	Personality	Selection	Faking
*cognitive abilit**	*personality*	*applica**	*fak**
*cognitive skill**	*integrity*	*selection*	*malinger*
*mental abilit**	*emotional intelligence*	*incumbent*	*cheat*
*mental skill**	*emotional quotient*	*assessment*	*self-presentation*
intelligence	*self-report*	*hire*	*impression Management*
reasoning	*self-description*	*candidate*	*distort**
IQ	*noncognitive*	*allocation*	*self enhanc**
Raven	*Big 5*	*assignment*	*ideal employee*
Wonderlic	*Big Five*	*job*	*ATIC*
GMA	*Hexaco*		*identify criteria*
	NEO		
	IPIP		

Note. * = wildcard.

conducted over the course of 2016 and yielded 610 published articles, dissertations, book chapters and unpublished reports. (b) Additionally, we searched in the program booklets of the annual conferences of the Society for Industrial and Organizational Psychology (SIOP) for abstracts containing the four key topics mentioned above (for the years 1999 to 2015). A further 58 studies were detected with this approach. (c) After applying our inclusion and exclusion criteria (which we will describe in the next section) to our results up to this point, we contacted 32 experts by email, with experts being defined as study authors or dissertation supervisors of at least three studies. These authors were asked whether they knew of other studies that may

meet our criteria. In addition, we asked this question to all 26 authors of studies that lacked the information needed for our meta-analysis (this group of authors overlaps with the expert group). This approach resulted in another three studies. (d) Finally, we conducted a backward search based on the bibliographies of the studies found so far and of the publication lists of the aforementioned 32 experts; this delivered 30 additional studies.

Inclusion and Exclusion Criteria

To be included in our current meta-analysis, studies had to meet the following criteria: (a) Studies had to include some kind of selection situation. This was the case for field studies with a real selection situation (e.g., applying for a job or to a university) or laboratory studies with a simulated selection situation (e.g., induced by an instruction such as "Imagine you are applying for a job as a…"). (b) There had to be some motivation for the participants to fake and present themselves in a favorable way. Accordingly, we excluded field studies in which it was clear to the participants that the personality test score would not be used for selection purposes (e.g., Merkulova, Melchers, Kleinmann, Annen, & Tresch, 2014) and studies in which it was unclear whether the participants would be motivated to present themselves favorably (e.g. in a compulsory military service examination; Boss, König, & Melchers, 2015). Furthermore, we excluded laboratory studies in which some tests were filled out under selection conditions but the personality test was not (e.g., Peeters & Lievens, 2005). Moreover, we excluded studies which measured faking solely as overclaiming (e.g., Ackerman & Ellingsen, 2014) or as fraud in objective tests (e.g., Wright, Meade, & Gutierrez, 2014). (c) Personality had to be measured by self-report, and the personality scales must belong (or at least be assignable to) the Five-Factor model of personality. (d) Studies had to include some objective measurement of cognitive ability in the form of an intelligence or ability test. We also included studies reporting college admission test scores, for example from the Scholastic Aptitude Test (SAT) or American College Testing (ACT). However, studies which only reported academic achievements, such as the grade point average (GPA), were excluded. (e) Furthermore, studies

had to report the correlation between personality test scores and cognitive ability, as we used this correlation as the effect size. If the latter precondition was not met, we contacted the author(s) and requested the corresponding data. (f) In a final step, we excluded samples consisting of more than 10,000 individuals (e.g., Arthur, Doverspike, Muñoz, Taylor, & Carr, 2014; Huang, Wells, & Nguyen, 2015; Levashina et al., 2014) in order to prevent an overemphasis of these single study effect sizes.

Final Dataset

The final dataset consisted of 66 studies with 115 independent samples, 825 effect sizes (in total for all dimensions of the Five-Factor model of personality), and a total $N = 46{,}265$ participants ($N = 2{,}289{,}508$ without excluding the three disproportionately large studies, see exclusion criteria). Of these 66 studies, 33 came from the forward database search, and seven were SIOP conference articles. Authors from our expert list made us aware of three further studies, and another 23 arose during the backward search. The oldest included study was published in 1957; the most recent studies were conducted in 2016. The entire process up to this final dataset is shown in Figure III.1. Appendix A Table 1 gives an overview of all studies included, Appendix A Table 2 gives an overview of the resulting independent samples.

Coding of Studies

Personality scales not based on the Five-Factor model of personality were grouped into the model based on the work of Salgado and Táuriz (2014). If a specific dimension was not mentioned in their overview, we used a strategy developed by Barrick and Mount (1991). Five raters, all psychology graduates (three with a PhD and two with a Master's degree or equivalent) categorized the leftover dimensions into the Five-Factor model of personality. The classification had to be accomplished with a 75% majority; abstentions were not counted. If a scale could not be clearly classified, we excluded it from our analysis. For the purpose of simplification and better interpretation, *Neuroticism* was reverse-coded as *Emotional Stability.*

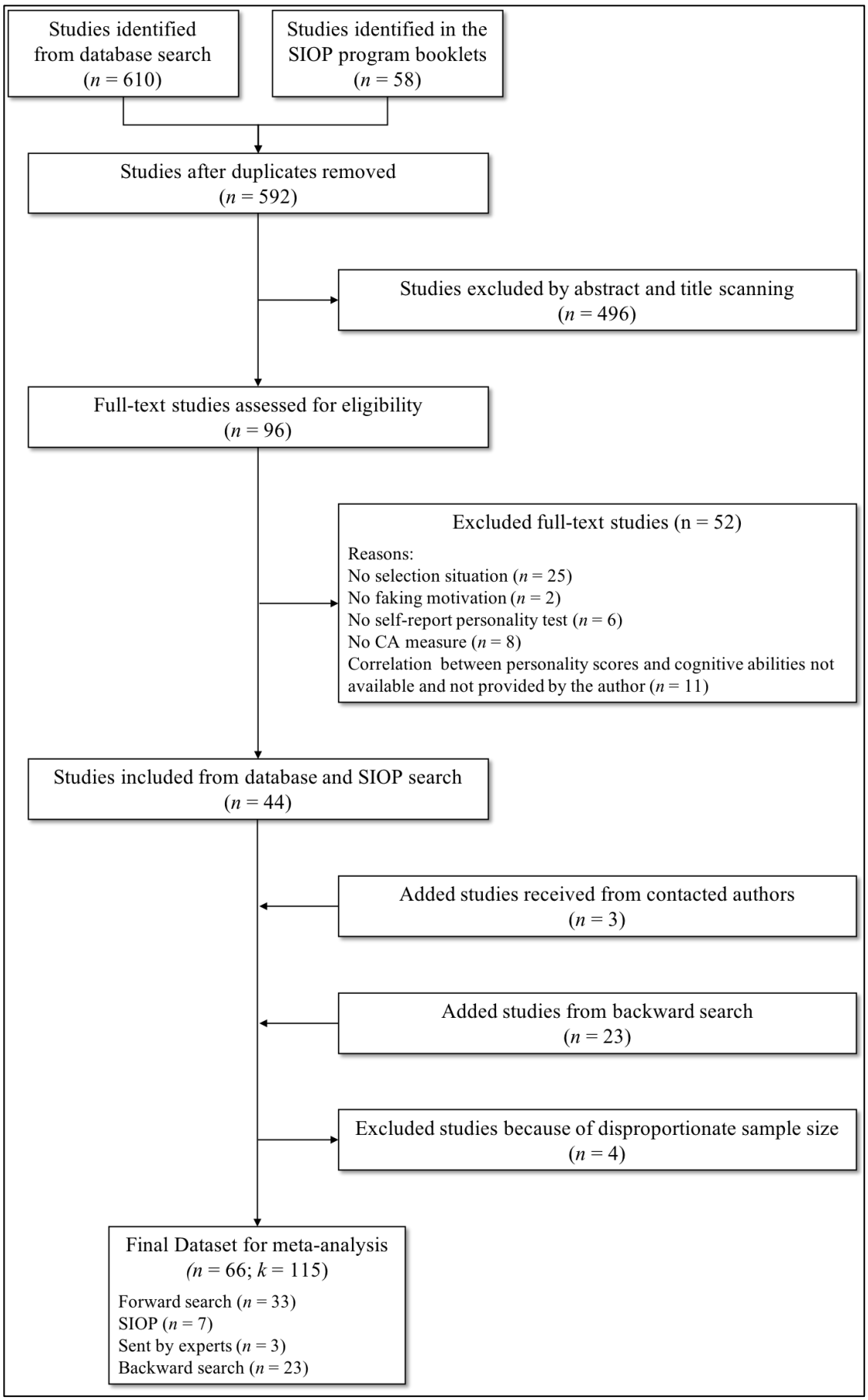

Figure III.1. Flowchart showing the process of identifying and selecting studies.

We distinguished three types of cognitive ability tests: verbal tests (e.g., the Word Comprehension subtest of the Wechsler Adult Intelligence Scale; Wechsler, 2014), non-verbal tests (e.g., Raven's Progressive Matrices; Raven, 1938), and mixed tests (e.g., Wonderlic Personnel Test; Wonderlic, 1992). Categorization occurred primarily according to the information provided in the corresponding article and was carried out by two raters individually (both with a Master's degree or equivalent). If the authors did not provide the relevant information in the article, the categorization was conducted with the help of the test manuals. To be able to compare effect sizes in studies that provided correlations for verbal and non-verbal cognitive ability tests, we calculated the averaged effect size and categorized it as mixed.

Several studies reported multiple correlations between the variables of interest for a single sample (e.g., there were two or more correlations between personality scales that were categorized as the same personality factor and the cognitive ability measurement, or studies provided only the correlation of two or more cognitive ability subtests that were both categorized as verbal/non-verbal). In these cases, we calculated an *n*-weighted average using Fisher's *Z*-values to avoid violating the independence assumption for sample coefficients (Schmidt & Hunter, 2014).

Meta-Analytic Procedures

We followed the procedures for psychometric meta-analysis described by Schmidt and Hunter (2014). Mean correlations between cognitive ability and personality dimensions were estimated by sample size-weighted individual correlation coefficients. These "bare bones" correlations are comparable with the results from methods in the tradition of Hedges and colleagues (Hedges & Vevea, 1998). Furthermore, psychometric meta-analysis provides the option to correct for measurement error and range restriction, yielding the population correlation ρ. As not all studies reported the required information, we were unable to correct correlations individually and thus used artifact distribution meta-analysis (Schmidt & Hunter,

2014) instead. Measurement error was corrected for cognitive ability (the predictor) and for the personality scales (the criterion). We also corrected for indirect range restriction of cognitive ability, since many samples may have already been preselected on the basis of cognitive ability or related constructs (e.g., students in laboratory studies who are selected based on their Scholastic Assessment Test). For the meta-analytic calculations, we used the metafor package (Viechtbauer, 2010) in R 3.3.3 (R Core Team, 2017) and the Schmidt and Le meta-analysis program (Schmidt & Le, 2005).

We report 80% credibility intervals around ρ to provide analysis of the homogeneity of the corrected effect sizes as well as the percentages of the variance in effect size explained by artifacts (Schmidt & Hunter, 2014). In this regard, based on the "75% rule" (Schmidt & Hunter, 2014), less than 75% variance reduction by artifact correction indicates the presence of additional moderators. For moderator analysis, we calculated 95% confidence intervals around ρ to locate meaningful moderating effects (Schmidt & Hunter, 2014; Whitener, 1990), using the formula reported by Whitener (1990).

To address availability bias, we first calculated fail-safe Ns. Following the recommendations of Schmidt and Hunter (2014) as well as McNatt (2000), we regarded correlations of $r = 0.05$ and below as trivial. For additional analysis of file drawer bias (Light & Pillemer, 1984), we created funnel plots of the included effect sizes for all of our meta-analytic calculations using the R-package metafor (Viechtbauer, 2010). These funnel plots were adjusted for missing studies using the trim and fill method (Duval & Tweedie, 2000). All plots were relatively symmetrical, indicating that our meta-analysis did not seem to prioritize consideration of statistically significant effects over nonsignificant effects. As an example, Figure III.2 shows the funnel plots for the non-selection samples, the field samples and the laboratory samples.

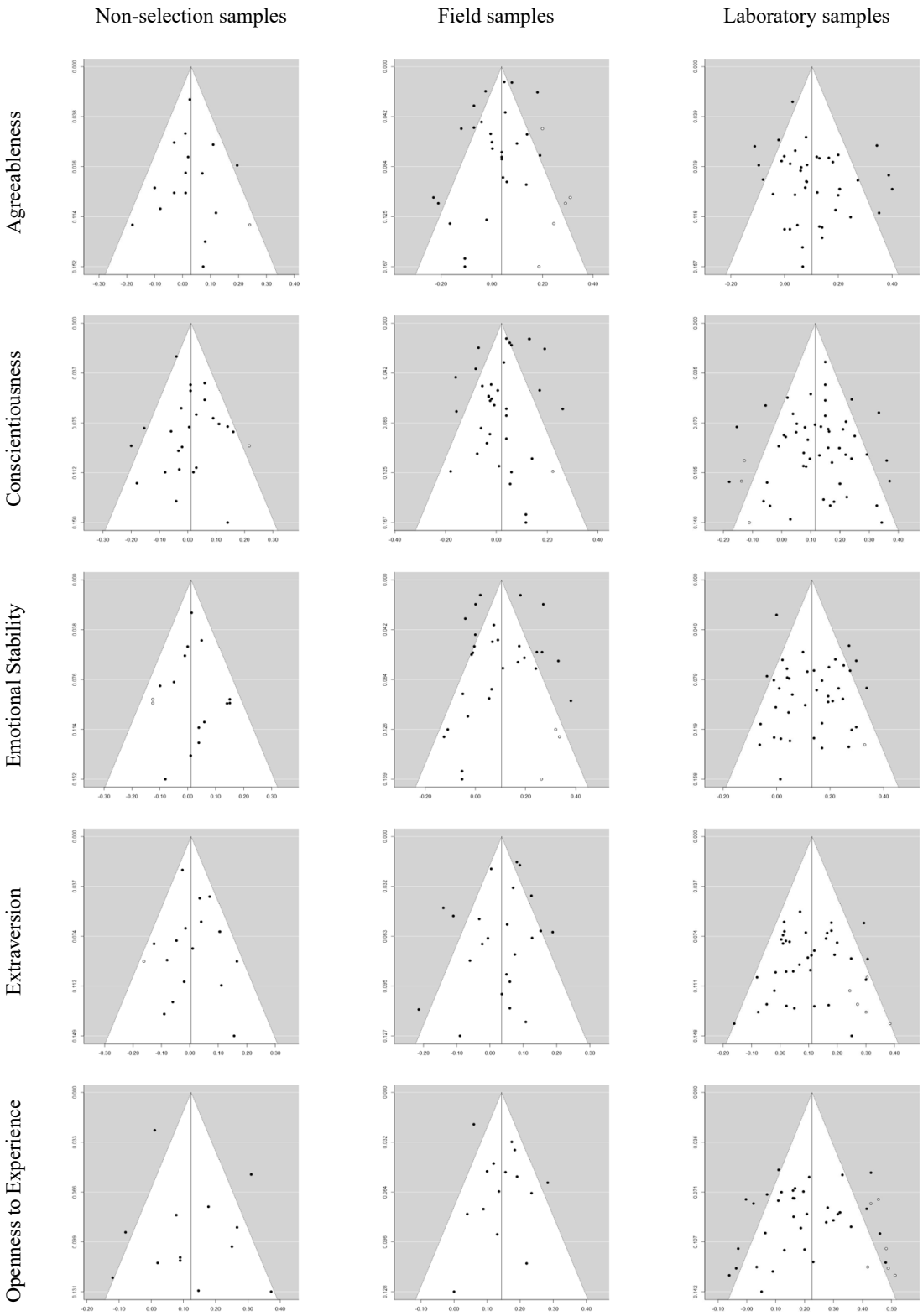

Figure III.2. Funnel plots for non-selection samples, field samples and laboratory samples based on Bare Bones Analyses. Correlations employed in the analysis are represented by black dots, correlations complemented by the trim and fill method are represented as white dots. The 95% standard error of the mean correlation is represented as a dotted line.

Results

Validation of the Representativeness of Our Control Data

First, we checked whether the meta-analytic outcome for our non-selection samples corresponds with the findings of other meta-analyses on the relationship between personality factors and cognitive ability (i.e., with the results of Lange; Lange, 2013; Poropat, 2009). Table III.2 shows the results of this comparison. As can be seen, the confidence intervals for all five dimensions show substantial overlap, indicating that our meta-analytic data for non-selection samples replicate the current state of research.

Table III.2
Comparison of Our Non-Selection Samples With Already Published Meta-Analysis

	Poropat (2009)	Lange (2013)	Non-selection samples
Agreeableness			
ρ	-.019	.01	.032
95%-CI	[-.052 <> .014]	[-.02 <> .04]	[-.001 <> .064]
Conscientiousness			
ρ	.002	-.04	.000
95%-CI	[-.058 <> .062]	[-.08 <> .00]	[-.025 <> .026]
Emotional Stability			
ρ	.039	.09	.025
95%-CI	[.018 <> .061]	[.11 <> .07]	[-.007 <> .057]
Extraversion			
ρ	-.012	-.02	.001
95%-CI	[-.040 <> .016]	[-.06 <> .02]	[-.029 <> .030]
Openness to Experience			
ρ	.125	.19	.109
95%-CI	[.100 <> .151]	[.16 <> .22]	[.074 <> .144]

Note. 95%-CI = 95%-confidence interval [lower bound <> upper bound]. The results of Poropat are not contents of the corresponding paper but were provided to us by the author on request.

Main Analysis

Table III.3 shows the meta-analytic results regarding the differences between selection and non-selection situations. The overall true-score correlations between cognitive ability and Five-Factor personality test scores in the selection samples were: $\rho_{Conscientiousness} = .079$, $\rho_{Emotional\ Stability} = .114$, $\rho_{Agreeableness} = .065$, $\rho_{Extraversion} = .061$, and $\rho_{Openness\ to\ experience} = .168$. Confidence

intervals did not include zero for any of the dimensions, and for all dimensions except for Agreeableness, the confidence intervals did not overlap with the corresponding confidence intervals of the non-selection samples. As assumed in H_1, significantly higher correlations were found in the selection samples for the remaining four dimensions. In the selection samples, only 24% - 52% of the variance in effect size was explained by artifacts, which indicates that further moderator effects are likely (Schmidt & Hunter, 2014).

Moderator Analysis 1: Study Design (Laboratory vs. Field)

Table III.4 summarizes the meta-analytic results for the relationship between cognitive ability and the Five-Factor dimensions separately for non-selection samples, samples derived from field studies, and samples derived from laboratory studies. For all five dimensions, the same order of moderator levels emerged: True-score correlations were smallest for non-selection samples, slightly higher in field studies, and clearly higher in laboratory studies. For Conscientiousness and Extraversion, none of the moderator-level confidence intervals overlapped. For Agreeableness and Openness to Experience, the confidence intervals did not overlap for non-selection and laboratory studies but did overlap for non-selection and field studies. For Emotional Stability, the confidence intervals did not overlap for non-selection and field studies, or for non-selection and laboratory studies; however, they did overlap for field and laboratory studies. In summary, a moderation by the study design, as assumed in H_2, was found for all Big-Five dimensions except for Emotional Stability. For both groups of studies, laboratory and field, the percentage of reduced variance in effect size through artifacts did not meet the traditional 75% criterion, indicating further moderator effects.

Moderator Analysis 2: Type of Personality Test

Table III.5 presents our meta-analytical results separately for the use of forced-choice and single-stimulus personality tests. Correlations for single-stimulus tests were very similar to the results for selection situations of the main analysis. Results for forced-choice tests showed very wide confidence intervals for Agreeableness, Emotional Stability, and Extraversion (each

including the corresponding confidence interval on the single-stimulus moderator level). True-score correlations for Conscientiousness and Openness to Experience were higher for forced-choice tests than for single-stimulus tests, in both cases with non-overlapping confidence intervals. In summary, the results only partially support H_3, but it must also be noted that the analysis for the moderator level of the forced-choice tests were based on a small number of samples and participants: In contrast to the previous analyses, the results are based on only three to seven samples and at most 1,375 participants. For the forced-choice tests, the percentage of reduced variance in effect size through artifacts still did not meet the 75% criterion, which hints at further moderator effects.

Moderator Analysis 3: Type of Cognitive Ability Test

Table III.6 summarizes the meta-analytic results separately for the use of verbal, non-verbal, or mixed cognitive ability tests. The overall picture is mixed: With regard to H_4, we only found a higher effect of verbal than of non-verbal cognitive ability tests for Openness to Experience. Conscientiousness and Emotional Stability showed the reversed pattern. For Agreeableness and Extraversion, there was no difference between the two types of ability tests. The results of the mixed category tended to lie between those for verbal and non-verbal cognitive ability tests. In summary, these results do not provide clear evidence for the moderation hypothesis specified under H_4, but rather suggest that the relationships between different types of cognitive ability and faking may be more complex than hitherto assumed. Like the preceding moderation analysis, this analysis was not able to explain the majority of variance in the corresponding effect sizes: Only one of 15 separate meta-analytic calculations fulfilled the 75% criterion for variance reduction.

Table III.3
Main Meta-Analytic Results

			Artifact Distribution						Bare-bones Meta-analysis		Meta-analysis with full correction for artifacts							
	k	*N*	r_{xx}	SD_{rxx}	r_{yy}	SD_{ryy}	U_x	SD_U	*r*	SD_r	ρ	σ	*VAR (%)*	80%-CE-lb	80%-CE-ub	95%-CI-lb	95%-CI-ub	N_{FS}
Agreeableness																		
nss	16	3,936	.96	.08	.85	.09	.89	.16	.026	.062	.032	.000	107	.032	.032	-.001	.064	-5
ss	69	28,346	.97	.08	.83	.10	.95	.11	.055	.084	.065	.078	36	-.035	.165	.053	.077	21
Conscientiousness																		
nss	24	5,704	.96	.07	.88	.12	.91	.15	.000	.071	.000	.034	84	-.043	.044	-.026	.026	-23
ss	85	38,109	.97	.08	.88	.12	.94	.12	.068	.091	.079	.088	29	-.034	.192	.069	.089	50
Emotional Stability																		
nss	14	3,758	.97	.07	.86	.11	.94	.25	.021	.051	.025	.000	143	.025	.025	-.007	.057	-6
ss	71	28,785	.97	.08	.87	.11	.95	.11	.099	.105	.114	.104	24	-.020	.247	.102	.125	91
Extraversion																		
nss	17	4,358	.95	.09	.92	.08	.91	.15	.001	.068	.001	.032	84	-.040	.042	-.029	.030	-16
ss	69	20,376	.97	.08	.88	.12	.95	.11	.061	.079	.070	.061	55	-.007	.147	.056	.084	28
Openness to Experience																		
nss	14	3,039	.97	.07	.76	.13	.87	.25	.078	.116	.109	.127	37	-.054	.271	.074	.144	17
ss	58	14,044	.98	.07	.83	.12	.94	.12	.140	.093	.168	.076	52	.070	.265	.152	.183	137

Note. nss = non-selection situations; ss = selection situations; r_{xx} = average reliability of predictor; r_{yy} = average reliability of criterion; *U* = average restriction in variance; CE = credibility interval; CI = confidence interval; lb = lower bound; ub = upper bound; VAR (%) = part of variance that can be attributed to artifacts; N_{FS} = fail-safe *N*.

Table III.4

Moderator Analysis: Non-Selection Situations vs. Field Studies vs. Laboratory Studies

			Artifact Distribution						Bare-bones Meta-analysis		Meta-analysis with full correction for artifacts							
	k	*N*	r_{xx}	SD_{rxx}	r_{yy}	SD_{ryy}	U_x	SD_U	*r*	SD_r	ρ	σ	*VAR (%)*	80%-CE-lb	80%-CE-ub	95%-CI-lb	95%-CI-ub	N_{FS}
Agreeableness																		
nss	16	3,936	.96	.08	.85	.09	.89	.16	.026	.062	.032	.000	107	.032	.032	-.001	.064	-5
field	28	21,713	.99	.05	.85	.12	.98	.07	.048	.072	.053	.068	26	-.034	.141	.040	.067	2
lab	41	6,633	.96	.09	.82	.08	.93	.12	.079	.112	.097	.094	51	-.024	.218	.073	.121	39
Conscientiousness																		
nss	24	5,704	.96	.07	.88	.12	.91	.15	.000	.071	.000	.034	84	-.043	.044	-.026	.026	-23
field	35	29,227	.97	.07	.90	.13	.99	.06	.051	.080	.056	.077	20	-.042	.154	.045	.067	5
lab	50	8,882	.97	.08	.86	.12	.91	.13	.122	.103	.149	.081	57	.045	.253	.129	.169	100
Emotional Stability																		
nss	14	3,758	.97	.07	.86	.11	.94	.25	.021	.051	.025	.000	143	.025	.025	-.007	.057	-6
field	30	22,202	.99	.05	.88	.12	.98	.06	.096	.103	.105	.104	14	-.028	.238	.092	.118	33
lab	41	6,583	.96	.09	.87	.09	.92	.12	.109	.111	.130	.091	52	.014	.246	.107	.154	66
Extraversion																		
nss	17	4,358	.95	.09	.92	.08	.91	.15	.001	.068	.001	.032	84	-.040	.042	-.029	.030	-16
field	23	14,387	.97	.07	.86	.15	.98	.07	.052	.068	.059	.060	36	-.019	.136	.042	.075	4
lab	37	4,864	.96	.09	.86	.09	.92	.13	.094	.100	.114	.055	79	.044	.185	.087	.142	48
Openness to Experience																		
nss	14	3,039	.97	.07	.76	.13	.87	.25	.078	.116	.109	.127	37	-.054	.271	.074	.144	17
field	15	6,809	.98	.06	.79	.12	.97	.09	.125	.065	.147	.049	58	.085	.210	.124	.170	30
lab	36	4,653	.97	.08	.82	.10	.91	.14	.184	.125	.229	.103	54	.097	.361	.202	.255	129

Note. nss = non-selection situations; field = field studies; lab = laboratory studies; r_{xx} = average reliability of predictor; r_{yy} = average reliability of criterion; *U* = average restriction in variance; CE = credibility interval; CI = confidence interval; lb = lower bound; ub = upper bound; VAR (%) = part of variance that can be attributed to artifacts; N_{FS} = fail-safe *N*.

Table III.5

Moderator Analysis: Single-Stimulus vs. Forced-Choice Personality Tests on Level Selection Situations

			Artifact Distribution						Bare-bones Meta-analysis		Meta-analysis with full correction for artifacts							
	k	*N*	r_{xx}	SD_{rxx}	r_{yy}	SD_{ryy}	U_x	SD_U	*r*	SD_r	ρ	σ	*VAR (%)*	80%-CE-lb	80%-CE-ub	95%-CI-lb	95%-CI-ub	N_{FS}
Agreeableness																		
FC	3	524	1.00	.00	.91	.16	1.00	.00	.091	.092	.096	.054	68	.028	.165	.011	.180	3
SS	66	27,822	.97	.08	.83	.10	.95	.11	.054	.083	.064	.078	36	-.035	.164	.052	.076	19
Conscientiousness																		
FC	7	1,375	.97	.07	.78	.21	.87	.17	.174	.098	.232	.074	66	.137	.327	.183	.280	26
SS	78	36,734	.97	.08	.88	.12	.95	.11	.065	.086	.074	.086	28	-.036	.185	.064	.085	39
Emotional Stability																		
FC	4	660	1.00	.00	.83	.20	.93	.14	.074	.099	.087	.071	63	-.004	.178	.011	.162	3
SS	67	28,125	.97	.08	.88	.10	.95	.11	.099	.105	.114	.105	23	-.020	.248	.102	.125	86
Extraversion																		
FC	4	660	1.00	.00	.88	.17	.93	.14	.061	.090	.070	.051	76	.005	.135	-.006	.146	2
SS	65	19,716	.97	.08	.88	.11	.95	.11	.060	.080	.069	.062	53	-.010	.148	.055	.083	25
Openness to Experience																		
FC	3	440	1.00	.00	.85	.27	.87	.22	.226	.091	.281	.000	111	.281	.281	.197	.360	14
SS	55	13,604	.98	.07	.83	.11	.94	.12	.137	.092	.164	.075	52	.068	.260	.148	.180	126

Note. FC = forced-choice personality tests; SS = single-stimulus personality tests; r_{xx} = average reliability of predictor; r_{yy} = average reliability of criterion; *U* = average restriction in variance; CE = credibility interval; CI = confidence interval; lb = lower bound; ub = upper bound; VAR (%) = part of variance that can be attributed to artifacts; N_{FS} = fail-safe *N*.

Table III.6

Moderator Analysis: Mixed vs. Nonverbal vs. Verbal Cognitive Ability Tests

			Artifact Distribution						Bare-bones Meta-analysis		Meta-analysis with full correction for artifacts						
	k	*N*	r_{xx}	SD_{rxx}	r_{yy}	SD_{ryy}	U_x	SD_U	*r*	SD_r	ρ	σ	*VAR (%)*	80%-CE-lb	80%-CE-ub	95%-CI-lb	95%-CI-ub	N_{FS}
Agreeableness																		
mixed	50	18,686	.96	.09	.81	.09	.94	.12	.031	.081	.038	.075	41	-.058	.134	.024	.052	-11
non	17	13,722	.96	.11	.88	.13	1.00	.00	.049	.087	.054	.086	17	-.056	.163	.037	.070	2
verbal	16	6,088	.87	.14	.83	.10	.95	.19	.012	.093	.015	.095	31	-.107	.136	-.011	.040	-11
Conscientiousness																		
mixed	66	28,475	.96	.09	.87	.12	.93	.13	.044	.089	.053	.088	30	-.060	.166	.041	.064	4
non	19	13,871	.96	.11	.91	.11	1.00	.00	.071	.096	.076	.094	15	-.044	.196	.060	.093	10
verbal	16	6,081	.89	.14	.83	.12	.95	.19	-.041	.099	-.051	.103	28	-.183	.082	-.076	-.026	-32
Emotional Stability																		
mixed	52	19,125	.96	.09	.86	.10	.94	.12	.057	.094	.067	.091	32	-.049	.184	.053	.082	19
non	17	13,722	.96	.11	.90	.12	1.00	.00	.129	.097	.139	.095	14	.017	.261	.123	.155	31
verbal	16	6,088	.87	.14	.85	.09	.95	.19	.029	.086	.035	.083	37	-.071	.142	.010	.061	-4
Extraversion																		
mixed	52	18,244	.96	.09	.86	.11	.94	.12	.061	.078	.072	.065	49	-.011	.156	.058	.087	24
non	16	6,275	.95	.12	.92	.12	1.00	.00	.028	.057	.030	.029	78	-.006	.067	.006	.055	-6
verbal	17	6,172	.88	.14	.85	.11	.96	.19	.031	.084	.038	.079	40	-.063	.139	.013	.063	-4
Openness to Experience																		
mixed	44	10,546	.97	.08	.81	.11	.92	.13	.147	.094	.182	.078	53	.082	.282	.164	.201	117
non	12	5,951	.95	.13	.90	.13	1.00	.00	.095	.071	.103	.058	41	.028	.178	.078	.128	13
verbal	16	7,697	.89	.14	.84	.12	.95	.19	.129	.088	.159	.086	37	.049	.268	.137	.180	35

Note. mixed = mixed cognitive ability tests; non = nonverbal cognitive ability tests; verbal = verbal cognitive ability tests; r_{xx} = average reliability of predictor; r_{yy} = average reliability of criterion; *U* = average restriction in variance; CE = credibility interval; CI = confidence interval; lb = lower bound; ub = upper bound; VAR (%) = part of variance that can be attributed to artifacts; N_{FS} = fail-safe *N*.

Discussion

Our meta-analysis showed, for the first time, that the relationship between cognitive ability and personality scores differs between selection situations and non-selection situations. The correlations for selection situations were significantly positive for all Big Five personality dimensions, and we found significantly higher meta-analytical correlations for selection samples ($\rho = .065 – .168$) than for non-selection samples ($\rho = .000 – .109$). In other words, personality test scores share more variance with cognitive ability when measured under selection conditions. Assuming that applicant faking is primarily responsible for this change at the construct level, our results provide evidence to support those faking theories which argue that cognitive ability is a determinant of the ability to fake (e.g., Marcus, 2009; Snell et al., 1999; Tett & Simonet, 2011).

This pattern becomes even clearer when the results are considered separately according to the study design. Our results revealed significantly higher correlations between cognitive ability and personality in laboratory studies than in field studies. The proportion of variance in personality that can be explained by cognitive ability is particularly high in laboratory studies. These results fit in with the arguments put forward by some authors (e.g., Ones et al., 1996) that the mental processes involved in answering personality tests in a real application situation or in a laboratory study are hardly comparable. At this point, it can be stated that even if the correlations between field studies and non-selection studies differed, the results from these two study designs showed more similarity with each other than with the results of laboratory studies.

Indeed, there may be major motivational differences between the laboratory vs. field situations. According to most current faking models, the relationship between faking motivation and faking behavior is moderated by the ability aspect of faking (e.g., Ellingson & McFarland, 2011; Goffin & Boyd, 2009; McFarland & Ryan, 2006; Roulin et al., 2016). The individual faking motivation in real application situations varies greatly due to individual differences, concrete subjective considerations and situational circumstances. In contrast,

participants' motivation to draw an improved picture of themselves in a laboratory study results from a well-controlled indirect (or sometimes direct) instruction to fake. This may result in a more uniform faking motivation in laboratory studies than in field studies. In line with an assumed moderating effect of cognitive ability, these limited motivational differences between participants in laboratory studies may lead to the more pronounced link between cognitive ability and actual faking behavior. At the same time, such differences in motivation may also be a reason why differences between field and non-selection samples emerge solely regarding the personality dimensions of Conscientiousness, Emotional Stability, and Extraversion. These dimensions likely have a particularly high face validity for the work context – applicants might consider them to be especially important for future employers (see Jansen, König, Kleinmann, & Melchers, 2012). Accordingly, the motivation of most applicants to present themselves in a better light regarding these dimensions should be uniformly high, which in turn should increase the relevance of cognitive ability for successful faking behavior.

Our findings regarding different types of personality tests, in particular single-stimulus and forced-choice, were less clear, mainly due to the small number of studies that actually used forced-choice tests. However, it is noteworthy that the correlations between Conscientiousness and cognitive ability in samples utilizing forced-choice tests were among the highest of all meta-analytic calculations in this study ($\rho = .232$). This may also be attributable to the fact that applicants consider this dimension to be particularly important for a future employer (cf. Jansen et al., 2012). In forced-choice tests, applicants usually have to choose between several response options that belong to different personality dimensions. Applicants with high cognitive ability might excel in recognizing the importance of Conscientiousness for the world of work, and therefore be more likely to choose answers corresponding to this dimension than applicants with lower cognitive ability. As such, our findings support many authors' claims that forced-choice personality tests appear to be harder to fake than single-stimulus tests (e.g., Christiansen, Burns, & Montgomery, 2005; Jackson, Wroblewski, & Ashton, 2000), but for this reason, they

may also lead to a bias in favor of applicants with higher cognitive ability (Rothstein & Goffin, 2006; Vasilopoulos et al., 2006).

With regard to the type of cognitive ability tests, our meta-analytic results contradicted the findings of previous research (Grieve & Mahar, 2010; MacCann, 2013). Our findings concerning this moderator analysis did not show a higher effect in the samples in which verbal cognitive ability was measured; rather, they indicated a stronger effect of non-verbal cognitive ability on faking in personality tests. Moreover, we even found a negative relationship between Conscientiousness and verbal cognitive ability in selection samples ($\rho = -.051$). A possible explanation for this counterintuitive finding might be that merely understanding the items can be accomplished equally well by all applicants and is not the main hurdle for faking in personality tests. Instead, non-verbal abilities such as the ability to see patterns behind items (i.e., being able to detect the corresponding dimension) and to draw conclusions on the required characteristics for a job (e.g., Kleinmann et al., 2011; König, Melchers, Kleinmann, Richter, & Klehe, 2007) might be more important for successful faking.

Theoretical Implications and Future Research Directions

This study contributes to the theoretical understanding of faking in several main aspects. First, our results help to clarify the question of the role of cognitive ability in the process of faking in personality tests. We were able to show that cognitive ability is more relevant for personality tests in selection situations than in non-selection situations. Contrary to the basic assumptions regarding the psychological construct of personality (Allport & Odbert, 1936; McCrae & Costa, 1985), our findings suggested that cognitive ability does play a role in personality assessment in selection situations. This supports the idea already put forward by previous researchers (Klehe et al., 2012; Wrensen & Biderman, 2005) that filling out a personality test in a selection situation is driven by a slightly different underlying process than filling out such a test in a non-selection context.

Second, our findings support an alternative explanation of the criterion validity of personality tests in personnel selection, which has also been discussed in previous faking research (e.g., Johnson & Hogan, 2006; Kleinmann et al., 2011). In general, cognitive ability is one of the best predictors of work performance, which may also explain part of the criterion validity of personality tests through the relationship studied in this meta-analysis. Therefore, in light of our findings, the following questions arise: Are we actually measuring the construct – personality – which we want to measure in selection situations? And are personality tests in selection situations also performance tests, at least to a small extent?

Third, the discrepancies we found between different study designs also indicate that the construct captured in laboratory studies does not fully correspond to the construct captured in real selection situations. Although Ones et al. (1996) had already pointed out that the mental processes underlying the filling out of a personality test may differ between laboratory and field situations, our results even indicate that this discrepancy may be greater than that between selection and non-selection situations. This, in turn, raises the question of to what extent results from laboratory studies can be generalized to real selection situations, and whether recommendations for personnel selection should be derived from such results at all.

For further research, we would therefore like to encourage a stronger focus on field studies wherever possible. We also call for a stronger verification of the construct validity of the personality tests used in the selection context, and above all, we recommend that this psychometric property is evaluated in the actual selection context. Most importantly, in our opinion, faking research should focus more on the mental processes, strategies and objectives of applicants in selection situations (cf. König, Merz, & Trauffer, 2012; Ziegler, 2011). Only through a better understanding of what is going on in the mind of applicants when they fill out personality tests can we fully understand the phenomenon of faking.

Implications for Personnel Selection

In the real world of personnel selection, many organizations are concerned that applicants' faking behavior might seriously undermine the usefulness and validity of personality tests. Therefore, persons in charge of personnel selection may be greatly interested to know that cognitive ability plays a major role when applicants fill out a personality test, and that more intelligent applicants also tend to have higher scores on such personality tests. In our opinion, these findings may inform the use of personality tests in personnel selection in at least two aspects. (a) Our findings raise the question of whether the intended personality constructs are really being measured in selection situations, or whether personality tests in assessments partly constitute a hidden cognitive ability test. At this point, a company may simply argue that as long as employees perform well, it does not matter whether they are doing so because they are truly conscientious or because they are smart. In response to this, we would argue that when more intelligent applicants fake to achieve higher scores on personality tests, this phenomenon may also go hand in hand with other rather negative behavior in the workplace. For example, applicants who faked in the selection process were found to show more counterproductive work behavior on average (Peterson, Griffith, Isaacson, O'Connell, & Mangos, 2011). Thus, organizations should be aware that personality tests do not necessarily measure the same psychological construct in personnel selection as in non-selection situations. As previous meta-analyses have shown (e.g., Barrick & Mount, 1991), this is not necessarily detrimental to the predictive validity of personality tests, but it may affect organizations' internal justification and selection of personality tests as a personnel selection tool. (b) As a further practical implication of our findings, we recommend caution when using forced-choice tests to measure personality. Forced-choice tests are considered harder to fake (e.g., Christiansen et al., 2005; Jackson et al., 2000) but also showed a fairly large proportion of shared variance with cognitive ability. Especially for the dimension of Conscientiousness, which has the highest predictive validity for work performance (Barrick & Mount, 1991), we found high correlations with cognitive

ability. Organizations should therefore be aware that forced-choice tests likely have the advantage of being less prone to faking and simultaneously the disadvantage of measuring the actual construct of personality to an even smaller extent than single-stimulus tests.

Limitations

Three main limitations of the present meta-analysis need to be mentioned: First, we were unable to analyze the relationship between cognitive ability and faking in a direct manner – our approach only allowed us to compare correlations of personality and ability in selection and non-selection situations and to draw conclusions about the effect on faking from the corresponding discrepancies. The main reason for this limitation is that there was an insufficient number of primary studies which reported the correlations between cognitive ability and some direct measure of faking (e.g., the difference between an honest condition and an "as applicant" condition). Hopefully, more researchers will report such information in the future, enabling such correlations to be summarized in future meta-analytic work. Second, many of our analyses did not fulfill the 75% rule for variance reduction, suggesting room for other moderators (Schmidt & Hunter, 2014), which should be explored by future research. Third, it must be pointed out that the correlations found between cognitive ability and personality in selection situations were significantly higher than those in non-selection samples, but were rather small in effect size (Cohen, 1992; Hemphill, 2003; Paterson, Harms, Steel, & Credé, 2016). In general, cognitive ability plays a meaningful role in the assessment of personality in selection situations, but not the most influential role.

Conclusion

Personality tests are considered to be a valid instrument for predicting work performance but are often criticized for their susceptibility to faking. In this context, the role played by applicants' cognitive ability in faking remains controversial. The results of this meta-analysis shed some light on this issue by revealing significantly higher correlations between cognitive ability and personality in selection situations than in non-selection situations. Thus,

our findings suggest that other mental processes take place when filling out personality tests in selection situations, and that accordingly, a somewhat different psychological construct might be captured compared to non-selection situations. Viewed as a whole, this also provides indirect evidence for a link between cognitive ability and faking. Moderator analyses showed that the correlations with cognitive ability are particularly high in laboratory studies, whereas the correlations in field studies differ from non-selection situations to a considerably lesser degree. These findings suggest that the response behavior of participants in laboratory studies may be less representative of applicants in real selection situations than expected. Accordingly, the results obtained in the laboratory should only be generalized with the utmost caution. To gain a more holistic view of faking, future research may also be well served by shifting the focus somewhat away from predictors of this phenomenon and moving towards mental processes, strategies, and objectives of applicants in selection situations.

References

Ackerman, P. L., & Ellingsen, V. J. (2014). Vocabulary overclaiming — A complete approach: Ability, personality, self-concept correlates, and gender differences. *Intelligence*, *46*, 216–227. https://doi.org/10.1016/j.intell.2014.07.003

Allport, G. W., & Odbert, H. S. (1936). Trait-names: A psycho-lexical study. *Psychological Monographs*, *47*(1, Whole No. 211), i–171. https://doi.org/10.1037/h0093360

Anglim, J., Bozic, S., Little, J., & Lievens, F. (2018). Response distortion on personality tests in applicants: Comparing high-stakes to low-stakes medical settings. *Advances in Health Sciences Education*, *23*, 311–321. https://doi.org/10.1007/s10459-017-9796-8

Arthur, W., Doverspike, D., Muñoz, G. J., Taylor, J. E., & Carr, A. E. (2014). The use of mobile devices in high-stakes remotely delivered assessments and testing. *International Journal of Selection and Assessment*, *22*, 113–123. https://doi.org/10.1111/ijsa.12062

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*, 1–26. https://doi.org/10.1111/j.1744-6570.1991.tb00688.x

Birkeland, S. A., Manson, T. M., Kisamore, J. L., Brannick, M. T., & Smith, M. A. (2006). A meta-analytic investigation of job applicant faking on personality measures. *International Journal of Selection and Assessment*, *14*, 317–335. https://doi.org/10.1111/j.1468-2389.2006.00354.x

Boss, P., König, C. J., & Melchers, K. G. (2015). Faking good and faking bad among military conscripts. *Human Performance*, *28*, 26–39. https://doi.org/10.1080/08959285.2014.974758

Burns, G. N., & Christiansen, N. D. (2011). Methods of measuring faking behavior. *Human Performance*, *24*, 358–372. https://doi.org/10.1080/08959285.2011.597473

Christiansen, N. D., Burns, G. N., & Montgomery, G. E. (2005). Reconsidering forced-choice item formats for applicant personality assessment. *Human Performance*, *18*, 267–307. https://doi.org/10.1207/s15327043hup1803_4

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159. https://doi.org/10.1037/0033-2909.112.1.155

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*, 455–463. https://doi.org/10.1111/j.0006-341X.2000.00455.x

Ellingson, J. E., & McFarland, L. A. (2011). Understanding faking behavior through the lens of motivation: An application of VIE theory. *Human Performance*, *24*, 322–337. https://doi.org/10.1080/08959285.2011.597477

Furnham, A., Taylor, J., & Chamorro-Premuzic, T. (2008). Personality and intelligence correlates of assessment center exercises. *Individual Differences Research*, *6*, 181–192.

Galić, Z., Jerneić, Z., & Kovačić, M. P. (2012). Do applicants fake their personality questionnaire responses and how successful are their attempts? A case of military pilot cadet selection. *International Journal of Selection and Assessment*, *20*, 229–241. https://doi.org/10.1111/j.1468-2389.2012.00595.x

Goffin, R. D., & Boyd, A. C. (2009). Faking and personality assessment in personnel selection: Advancing models of faking. *Canadian Psychology*, *50*, 151–160. https://doi.org/10.1037/a0015946

Grieve, R., & Mahar, D. (2010). The role of fluid and emotional intelligence in malingering. *Australian Journal of Psychology*, *62*, 103–111. https://doi.org/10.1080/00049530903032836

Griffin, B., & Wilson, I. G. (2012). Faking good: Self-enhancement in medical school applicants. *Medical Education*, *46*, 485–490. https://doi.org/10.1111/j.1365-2923.2011.04208.x

Grubb, W. L., III., & McDaniel, M. A. (2007). The fakability of Bar-On's emotional quotient inventory short form: Catch me if you can. *Human Performance*, *20*, 43–59. https://doi.org/10.1207/s15327043hup2001_3

Hedges, L. V., & Vevea, J. L. (1998). Fixed- and random-effects models in meta-analysis. *Psychological Methods*, *3*, 486–504. https://doi.org/10.1037/1082-989X.3.4.486

Hemphill, J. F. (2003). Interpreting the magnitudes of correlation coefficients. *American Psychologist*, *58*, 78–79. https://doi.org/10.1037/0003-066X.58.1.78

Hooper, A. C. (2007). *Self-presentation on personality measures in lab and field settings: A meta-analysis* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3273134)

Huang, J., Wells, B. M., & Nguyen, D. (2015). Smart and slick: Relationships among cognitive ability, personality, and faking. Presented at the 30th Annual Conference of the Society for Industrial and Organizational Psychology, Philadelphia, PA.

Jackson, D. N., Wroblewski, V. R., & Ashton, M. C. (2000). The impact of faking on employment tests: Does forced choice offer a solution? *Human Performance*, *13*, 371–388. https://doi.org/10.1207/S15327043HUP1304_3

Jansen, A., König, C. J., Kleinmann, M., & Melchers, K. G. (2012). The interactive effect of impression motivation and cognitive schema on self-presentation in a personality inventory. *Journal of Applied Social Psychology*, *42*, 1932–1957. https://doi.org/10.1111/j.1559-1816.2012.00925.x

Johnson, J. A., & Hogan, R. (2006). A socioanalytic view of faking. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 209–231). Charlotte, NC: Information Age Publishing.

Klehe, U.-C., Kleinmann, M., Hartstein, T., Melchers, K. G., König, C. J., Heslin, P. A., & Lievens, F. (2012). Responding to personality tests in a selection context: The role of the ability to identify criteria and the ideal-employee factor. *Human Performance*, *25*, 273–302. https://doi.org/10.1080/08959285.2012.703733

Kleinmann, M., Ingold, P. V., Lievens, F., Jansen, A., Melchers, K. G., & König, C. J. (2011). A different look at why selection procedures work: The role of candidates' ability to identify criteria. *Organizational Psychology Review*, *1*, 128–146. https://doi.org/10.1177/2041386610387000

König, C. J., Hafsteinsson, L. G., Jansen, A., & Stadelmann, E. H. (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. https://doi.org/10.1111/j.1468-2389.2011.00562.x

König, C. J., Melchers, K. G., Kleinmann, M., Richter, G. M., & Klehe, U.-C. (2006). The relationship between the ability to identify evaluation criteria and integrity test scores. *Psychological Science*, *48*, 369–377.

König, C. J., Melchers, K. G., Kleinmann, M., Richter, G. M., & Klehe, U.-C. (2007). Candidates' ability to identify criteria in nontransparent selection procedures: Evidence from an assessment center and a structured interview. *International Journal of Selection and Assessment*, *15*, 283–292. https://doi.org/10.1111/j.1468-2389.2007.00388.x

König, C. J., Merz, A. -S., & Trauffer, N. (2012). What is in applicants' minds when they fill out a personality test? Insights from a qualitative study. *International Journal of Selection and Assessment*, *20*, 442–452. https://doi.org/10.1111/ijsa.12007

Lange, S. (2013). *Metaanalysen zum Zusammenhang von der Allgemeinen, Fluiden und Kristallisierten Intelligenz mit dem Fünf-Faktoren-Modell der Persönlichkeit unter besonderer Berücksichtigung des Publikationsbias [Meta-analysis on the relationship between the general, fluid and crystallized intelligence with the five-factor model of personality, taking the publication bias into account]* (Dissertation). Rheinische Friedrich-Wilhelms-Universität zu Bonn. Retrieved from http://hss.ulb.uni-bonn.de/2013/3286/3286.pdf

Levashina, J., Morgeson, F. P., & Campion, M. A. (2009). They don't do it often, but they do it well: Exploring the relationship between applicant mental abilities and faking. *International Journal of Selection and Assessment*, *17*, 271–281. https://doi.org/10.1111/j.1468-2389.2009.00469.x

Levashina, J., Weekley, J. A., Roulin, N., & Hauck, E. (2014). Using blatant extreme responding for detecting faking in high-stakes selection: Construct validity, relationship with general mental ability, and subgroup differences. *International Journal of Selection and Assessment*, *22*, 371–383. https://doi.org/10.1111/ijsa.12084

Light, R. J., & Pillemer, D. B. (1984). *Summing up: The science of reviewing research*. Cambridge, MA: Harvard University Press.

MacCann, C. (2013). Instructed faking of the HEXACO reduces facet reliability and involves more Gc than Gf. *Personality and Individual Differences*, *55*, 828–833. https://doi.org/10.1016/j.paid.2013.07.007

MacKenzie, W. I., Ployhart, R. E., Weekley, J. A., & Ehlers, C. (2010). Contextual effects on SJT responses: An examination of construct validity and mean differences across applicant and incumbent contexts. *Human Performance*, *23*, 1–21. https://doi.org/10.1080/08959280903400143

Marcus, B. (2009). 'Faking' from the applicant's perspective: A theory of self-presentation in personnel selection settings. *International Journal of Selection & Assessment*, *17*, 417–430. https://doi.org/10.1111/j.1468-2389.2009.00483.x

Martin, B. A., Bowen, C.-C., & Hunt, S. T. (2002). How effective are people at faking on personality questionnaires? *Personality and Individual Differences*, *32*, 247–256. https://doi.org/10.1016/S0191-8869(01)00021-6

McCrae, R. R., & Costa, P. T. (1985). Updating Norman's "adequacy taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, *49*, 710–721. https://doi.org/10.1037/0022-3514.49.3.710

McFarland, L. A., & Ryan, A. M. (2000). Variance in faking across noncognitive measures. *Journal of Applied Psychology*, *85*, 812–821. https://doi.org/10.1037/0021-9010.85.5.812

McFarland, L. A., & Ryan, A. M. (2006). Toward an integrated model of applicant faking behavior. *Journal of Applied Social Psychology*, *36*, 979–1016. https://doi.org/10.1111/j.0021-9029.2006.00052.x

McNatt, D. B. (2000). Ancient Pygmalion joins contemporary management: A meta-analysis of the result. *Journal of Applied Psychology*, *85*, 314–322. https://doi.org/10.1037//0021-9010.85.2.314

Merkulova, N., Melchers, K. G., Kleinmann, M., Annen, H., & Tresch, T. S. (2014). Effects of individual differences on applicant perceptions of an operational assessment center. *International Journal of Selection and Assessment*, *22*, 355–370. https://doi.org/10.1111/ijsa.12083

Mudgett, B. O. (2000). *Individual and situational influences on distortion of personality tests* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 9969296)

Mueller-Hanson, R. A., Heggestad, E. D., & Thornton, G. C., III. (2006). Individual differences in impression management: An exploration of the psychological processes underlying faking. *Psychology Science*, *48*, 288–312.

Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, *81*, 660–679. https://doi.org/10.1037/0021-9010.81.6.660

Paterson, T. A., Harms, P. D., Steel, P., & Credé, M. (2016). An assessment of the magnitude of effect sizes: Evidence from 30 years of meta-analysis in management. *Journal of Leadership & Organizational Studies*, *23*, 66–81. https://doi.org/10.1177/1548051815614321

Pauls, C. A., & Crost, N. W. (2005). Cognitive ability and self-reported efficacy of self-presentation predict faking on personality measures. *Journal of Individual Differences*, *26*, 194–206. https://doi.org/10.1027/1614-0001.26.4.194

Peeters, H., & Lievens, F. (2005). Situational judgment tests and their predictiveness of college students' success: The influence of faking. *Educational and Psychological Measurement*, *65*, 70–89. https://doi.org/10.1177/0013164404268672

Peterson, M. H., Griffith, R. L., Isaacson, J. A., O'Connell, M. S., & Mangos, P. M. (2011). Applicant faking, social desirability, and the prediction of counterproductive work

behaviors. *Human Performance*, *24*, 270–290. https://doi.org/10.1080/08959285.2011.580808

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin*, *135*, 322–338. https://doi.org/10.1037/a0014996

R Core Team. (2017). *R: A language and environment for statistical computing (Version 3.3.3)*. en, Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.R-project.org/

Raven, J. C. (1938). *Raven's progressive matrices*. Los Angeles, CA: Western Psychological Services.

Raymark, P. H., & Tafero, T. L. (2009). Individual differences in the ability to fake on personality measures. *Human Performance*, *22*, 86–103. https://doi.org/10.1080/08959280802541039

Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: What does current research support? *Human Resource Management Review*, *16*, 155–180. https://doi.org/10.1016/j.hrmr.2006.03.004

Roulin, N., Krings, F., & Binggeli, S. (2016). A dynamic model of applicant faking. *Organizational Psychology Review*, *6*, 145–170. https://doi.org/10.1177/2041386615580875

Salgado, J. F., & Táuriz, G. (2014). The Five-Factor Model, forced-choice personality inventories and performance: A comprehensive meta-analysis of academic and occupational validity studies. *European Journal of Work and Organizational Psychology*, *23*, 3–30. https://doi.org/10.1080/1359432X.2012.716198

Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Schmidt, F. L., & Le, H. (2005). *Hunter & Schmidt's meta-analysis program (Version 1.1)*. Iowa City, IA: The University of Iowa.

Snell, A. F., Sydell, E. J., & Lueke, S. B. (1999). Towards a theory of applicant faking: Integrating studies of deception. *Human Resource Management Review*, *9*, 219–242. https://doi.org/10.1016/S1053-4822(99)00019-4

Tett, R. P., & Simonet, D. V. (2011). Faking in personality assessment: A "multisaturation" perspective on faking as performance. *Human Performance*, *24*, 302–321. https://doi.org/10.1080/08959285.2011.597472

Vasilopoulos, N. L., Cucina, J. M., Dyomina, N. V., Morewitz, C. L., & Reilly, R. R. (2006). Forced-choice personality tests: A measure of personality and cognitive ability? *Human Performance*, *19*, 175–199. https://doi.org/10.1207/s15327043hup1903_1

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*, 1–48. https://doi.org/10.18637/jss.v036.i03

Wechsler, D. (2014). *WAIS-IV: Wechsler Adult Intelligence Scale - Fourth Edition*. San Antonio, TX: Pearson Assessment.

Whitener, E. M. (1990). Confusion of confidence intervals and credibility intervals in meta-analysis. *Journal of Applied Psychology*, *75*, 315–321. https://doi.org/10.1037/0021-9010.75.3.315

Wonderlic, E. F. (1992). *Wonderlic Personnel Test manual*. Northfield, IL: Wonderlic and Associates.

Wrensen, L. B., & Biderman, M. D. (2005). Factors related to faking ability: A structural equation model application. Presented at the 20th Annual Conference of the Society for Industrial and Organizational Psychology, Los Angeles, CA.

Wright, N. A., Meade, A. W., & Gutierrez, S. L. (2014). Using invariance to examine cheating in unproctored ability tests. *International Journal of Selection and Assessment*, *22*, 12–22. https://doi.org/10.1111/ijsa.12053

Ziegler, M. (2011). Applicant faking: A look into the black box. *The Industrial-Organizational Psychologist*, *49*, 29–36.

CHAPTER IV

DO YOU FAKE MORE BECAUSE OF YOUR NEIGHBORS? A MULTI-LEVEL STUDY ON REGIONAL AND INDIVIDUAL PREDICTORS OF FAKING INTENTIONS ACROSS THE U.S.

Abstract

Research on faking behavior and underlying intentions has mostly employed an intraindividual perspective, stressing the role of individual-level predictors. Inspired by theoretical arguments (e.g., from socioecological psychology) and cross-cultural studies, we hypothesize and demonstrate that in addition to individual-level predictors, there are also regional differences in faking intentions (within a country) and systematic links to regional-level features. Specifically, we tested and compared individual- and region-level predictors of applicant faking intentions ($N = 4860$ MTurk workers) across the largest 50 Metropolitan Statistical Areas of the U.S. using multi-level techniques. We found individual-level effects of conscientiousness, competitive worldviews and religiosity on individual-level faking intentions. On the regional level, macro-psychological conscientiousness was negatively associated with the average faking intentions in a region, while macro-psychological competitive worldviews (i.e., the prevailing competitive worldviews in a region) showed a positive relationship. Additionally, macro-psychological competitive worldviews predicted individual-level faking intentions even when controlling for individual-level competitive worldviews. No effects were found for regional parameters such as the economic situation of a region. We discuss implications for research and personnel selection.

Introduction

When using self-assessment tools such as personality tests or interviews, there is always a risk that applicants may distort their answers for various reasons, most likely to increase their chances of getting hired. Such behavior − known as faking − can impair the selection process if it leads to changes in the rank order of the candidates (Christiansen, Goffin, Johnston, & Rothstein, 1994; Donovan, Dwight, & Schneider, 2014; Rosse, Stecher, Miller, & Levin, 1998). According to theories of faking (e.g., Ellingson & McFarland, 2011; Roulin, Krings, & Binggeli, 2016; Tett & Simonet, 2011), some applicants have a higher motivation than others to draw an improved image of themselves, resulting in higher faking intentions and higher faking behavior. To explain these differences, previous research has focused primarily on applicants' personality, attitudes, and personal life situations (e.g., the financial pressure to get the job) (e.g., Buehl & Melchers, 2017; Ellingson, 2012; Levashina, Morgeson, & Campion, 2009). In other words, existing research has mostly employed an intraindividual perspective to understand the potential drivers of faking. Nevertheless, some scholars have also begun to look at cross-cultural differences in the prevalence of faking, showing them to be associated with shared attitudes and values of the inhabitants of a given country (Fell & König, 2016; Fell, König, & Kammerhoff, 2016).

When using self-assessment tools such as personality tests or interviews, there is always a risk that applicants may distort their answers for various reasons, most likely to increase their chances of getting hired. Such behavior − known as faking − can impair the selection process if it leads to changes in the rank order of the candidates (Christiansen, Goffin, Johnston, & Rothstein, 1994; Donovan, Dwight, & Schneider, 2014; Rosse, Stecher, Miller, & Levin, 1998). According to theories of faking (e.g., Ellingson & McFarland, 2011; Roulin, Krings, & Binggeli, 2016; Tett & Simonet, 2011), some applicants have a higher motivation than others to draw an improved image of themselves, resulting in higher faking intentions and higher faking behavior. To explain these differences, previous research has focused primarily on

applicants' personality, attitudes, and personal life situations (e.g., the financial pressure to get the job) (e.g., Buehl & Melchers, 2017; Ellingson, 2012; Levashina, Morgeson, & Campion, 2009). In other words, existing research has mostly employed an intraindividual perspective to understand the potential drivers of faking. Nevertheless, some scholars have also begun to look at cross-cultural differences in the prevalence of faking, showing them to be associated with shared attitudes and values of the inhabitants of a given country (Fell & König, 2016; Fell, König, & Kammerhoff, 2016).

However, group-level differences in shared values and attitudes may exist not only between inhabitants of different countries but also on a much smaller geographical level. Recent research from several fields in the applied social sciences showed that even regions located a few miles away from each other can differ systematically in the characteristics shared by their inhabitants (Bleidorn et al., 2016; Rentfrow et al., 2013) and that such differences can have an impact on people's collective behavioral tendencies (Audretsch, Obschonka, Gosling, & Potter, 2017; Currie, DellaVigna, Moretti, & Pathania, 2010). Such regional differences were also reported for variables that are known predictors of individual faking, such as conscientiousness (e.g., Bleidorn et al., 2016).

Viewing these findings in combination, we argue that faking intentions and behaviors might also vary across regions within the same country. Regional differences in faking may, for instance, make selection methods less effective in regions where faking is more prevalent. Moreover, regional differences in faking present a practical problem for personnel selection in companies. If such differences exist, companies may take them into account when selecting employees from different regions of a country; otherwise, candidates from regions with a low level of faking motivation may be disadvantaged.

By focusing on faking intentions as a proxy for actual faking behavior (e.g., Levashina & Campion, 2006; Marcus, 2009; Roulin et al., 2016), the goal of this study is therefore to gain a deeper understanding of regional differences in faking intentions within a given country (in

our case the U.S.) and the so far unknown role of regional-level predictors of faking intentions. Based on the socioecological psychology approach (Oishi & Graham, 2010; Rentfrow, Gosling, & Potter, 2008), individual and macro-psychological factors as well as regional conditions are tested as predictors of applicants' individual faking intentions and of average regional faking intentions. In the following sections, we develop our concrete hypotheses on these multi-level relationships.

Theoretical Background

The Socioecological Psychology Approach

The environment in which we grow up and live has an influence on who we are and how we act (e.g., Hofstede, 2003; Obschonka et al., 2018; Sirin, 2005). Despite this, when investigating specific behavior, psychological research has long ignored the influence of a person's living environment. Recently, however, efforts to address this issue have been growing (Gurven, 2018). Studies on regional differences and regional effects stem from a variety of fields of psychology and social sciences (see Oishi & Graham, 2010, for a historical overview). While cross-cultural studies are the best-known examples (e.g., Hofstede, 2003; Minkov, 2009), research focusing on small regional units is becoming increasingly important. In addition to shared values (Beugelsdijk & Klasing, 2016; Minkov & Hofstede, 2014) and objective regional differences (Block, Fisch, Lau, Obschonka, & Presse, 2018; Georgiadis & Christopoulos, 2017), these studies have also looked at the influence of macro-psychological characteristics. Inhabitants of a specific region (e.g., U.S. states or cities) have similarities in their attitudes and personality, and different geographical regions vary in these characteristics (Bleidorn et al., 2016; Rentfrow et al., 2008). Moreover, regional macro-psychological characteristics, such as regional differences in attitudes and personality traits, influence individual behavior and well-being (Bleidorn et al., 2016).

The underlying foundation of these studies is the so-called socioecological psychology approach, which aims to close the gap between psychological and sociological research. The basic idea of this approach is that human behavior always occurs against a social-ecological background (Bronfenbrenner, 1979). Humans live in social habitats, and there is a mutual interplay between social habitats and psychological processes and thus human behavior (Bronfenbrenner, 1979; Oishi, 2014). According to this approach, behaviors should only be investigated, and can only be fully understood, when considering the environment in which a person lives. The approach is not seen as a scientific theory in the narrower sense but rather as a meta-model that can be used to understand and study human behavior (Oishi, 2014).

To date, there has been little research from industrial/organizational (I/O) psychology employing such a socioecological psychology approach. As a rare exception, a study on job insecurity by Jiang and Probst (2017) showed that the level of income inequality in a region moderates the relationship between job insecurity and burnout. This first promising result suggests that it is possible to transfer this approach to other I/O research fields. Therefore, the goal of the present study is to look at the phenomenon of faking from a socioecological psychology perspective for the first time.

Faking From a Socioecological Psychology Perspective

Organizations often fill only part of their vacancies with applicants from their own geographical region (Ruhs & Anderson, 2010). Among other factors, labor shortages and the increasing mobility of the working population contribute to this situation (Clemens, 2011; Tonts, 2010). Thus, for many organizations, recruitment takes place at least nationwide, and in many cases internationally (Evans, 2010). Although research is scarce, applicants from different regions seem to differ not only in their qualifications and availability, but also in attitudes and values (Minkov & Hofstede, 2012, 2014). If applicants from different regions also behave differently during the selection process, ignoring these differences might lead to biases in personnel selection. Such differences may play an important role in applicant faking. Indeed,

a large number of applicants intentionally distort their answers in employment interviews (Levashina & Campion, 2007; Weiss & Feldman, 2006), personality tests (Griffith, Chmielowski, & Yoshita, 2007; Tett, Freund, Christiansen, Fox, & Coaster, 2012), or biodata inventories (Levashina et al., 2009; Levashina, Morgeson, & Campion, 2012). There are also large individual differences in the extent and prevalence of faking (Buehl, Melchers, Macan, & Kühnel, 2019; Hogue, Levashina, & Hang, 2013; Levashina & Campion, 2007).

Several theories have identified the individual motivation to fake as one of the main drivers of the intention to fake and of faking itself (Levashina & Campion, 2006; Marcus, 2009; Roulin et al., 2016). Although research has focused on individual-level antecedents of faking motivation and intention, such as personality traits or attitudes, socioecological psychology research predicts that the region in which an applicant lives impacts faking. For instance, applicants' level of conscientiousness is associated with faking behaviors (Lester, Anglim, & Fullarton, 2015; McFarland & Ryan, 2000; Roulin & Krings, 2016) but conscientiousness is not equally distributed across regions. In particular, Bleidorn et al. (2016) and Rentfrow et al. (2013) showed that some regions include more conscientious people than others, which might in turn lead to varying levels of faking intention. Moreover, some theories include situational factors as antecedents of faking (e.g., Griffith, Lee, Peterson, & Zickar, 2011), such as the labor market situation; by their very nature, these differ between regions. Finally, cross-cultural faking studies also demonstrated that cultural values and norms influence applicants' attitudes towards faking and faking behaviors (Fell & König, 2016; Fell et al., 2016; König, Hafsteinsson, Jansen, & Stadelmann, 2011; Sandal et al., 2014). In line with these arguments, we propose that applicants from different regions vary in their intention to fake in selection.

H_1: Applicants from different regions within a country vary in their faking intentions.

However, a more important theoretical and practical question is whether we can predict regional differences in faking intentions. In the next section, we introduce our hypotheses derived from the faking literature.

Regional Drivers of Faking

Regional economy. As early as 1986, Pandey argued that the concept of impression management, which is closely related to faking in interviews (Levashina & Campion, 2006), should be more prevalent in societies where applicants' chances of finding a job are limited. In a slow economy, individuals are more likely to face layoffs, personal financial struggles, or poverty. The pressure to get a job, and the competition for jobs, therefore increases. In such situations, applicants should be highly motivated to perform well in the selection process and thus be more willing to fake. Indicators of the regional or national economic situation are mentioned in a variety of faking theories, both directly in the form of economic factors and labor market indicators (e.g., Bangerter, Roulin, & Koenig, 2012; McFarland & Ryan, 2000; Snell, Sydell, & Lueke, 1999; Tett & Simonet, 2011) and indirectly in the form of the perceived "need for a job" (e.g., Goffin & Boyd, 2009; Griffith et al., 2011; Marcus, 2009).

It should be noted, though, that previous empirical results on the influence of the regional economic situation on inhabitants' faking are mixed and focus mainly on the regional unemployment rate (Fell & König, 2016; Fell et al., 2016; König et al., 2011; König, Wong, & Cen, 2012; Thackray, Tryba, & Griffith, 2013). In line with the theoretical arguments, we expect a negative relationship between the economic situation in a region and faking intentions.

H_2: Applicants living in a region with a stronger economy have lower faking intentions.

Crime rate. Research from different domains of psychology suggests that the ethical behaviors of people in the environment has a crucial influence on individual ethical decisions. (Gino, Ayal, & Ariely, 2009; Zey-Ferrell, Weaver, & Ferrell, 1979). The more people in the same environment engage in unethical behaviors, the less problematic it is for the individual to act unethically as well. For example, people from regions with higher rates of corruption commit more traffic offenses (Fisman & Miguel, 2007). Furthermore, in high crime regions,

people engage in fewer altruistic behaviors, such as donating blood (Buonanno, Montolio, & Vanin, 2009).

Applicants' willingness to fake in a job interview can also be construed as an ethical decision, which should also depend on the prevailing ethical norms in the region. The local crime rate represents a reliable and comparable indicator of regional-level unethical behaviors. This variable is usually recorded centrally by government and has been used in other socioecological psychology studies. In line with these arguments, we expect a positive relationship between the crime rate in a region and faking intentions.

H_3: Applicants living in a region with a higher crime rate will have higher faking intentions.

Individual and Macro-Psychological Drivers of Faking

Most faking theories describe individual-level antecedents of faking. Below we discuss three variables identified as key predictors of individual-level faking, namely conscientiousness, competitive worldviews, and religiosity. Following the basic idea of socioecological psychology research and empirical data, regions differ in their *macro-psychological characteristics*, which reflect the inhabitants' average level of certain psychological characteristics (Rentfrow et al., 2008). Previous research has reported regional differences across U.S. regions for conscientiousness (Bleidorn et al., 2016; Rentfrow et al., 2008) and religiosity (Chalfant & Heller, 1991). There may also be regional differences for competitive worldviews. For instance, exposure to social environments characterized by inequality or competition influence people's views of how competitive the world is (Roulin & Krings, 2016). And, different U.S. regions vary in their level of inequality (e.g., Fan & Casetti, 1994). Based on such regional differences in individual-level predictors of faking, we also expect to find a relationship between the macro-psychological characteristics of a region and the average faking intention of applicants from that region.

We based our regional-level hypotheses on the same line of argument put forward by Rentfrow (2008): If there are many people living in a region with above-average (vs. below-average) levels of one of these characteristics (i.e., a high macro-psychological level), then the individual-level effect of this characteristic should lead to higher (vs. lower) faking intentions for applicants from this region. This, in turn, should result in a relationship between the macro-psychological characteristics of a region and the mean faking intentions of applicants from that region, analogous to the relationship between the individual characteristics and faking intentions. However, according to empirical studies as well as statistical research (Blyth, 1972; Simpson, 1951), the generalization of results across different levels of aggregation does not always have to follow this pattern. *Simpson's Paradox* (a special case of the ecological fallacy) describes the fact that correlations found at the individual level do not necessarily occur when looking at the aggregated data of the regions due to confounding and random effects (Blyth, 1972; Simpson, 1951). Therefore, for each of the three individual-level predictors of faking, we wish to test whether the simple line of argument holds true. Accordingly, in addition to testing the relationship between the individual-level characteristics of applicants and their faking intentions, we test the analogous relationship between the macro-psychological characteristics of a region and the corresponding average faking intentions of applicants from that region.

Conscientiousness is characterized by accuracy, reliability, and diligence (McCrae & Costa, 1989; Roberts, Lejuez, Krueger, Richards, & Hill, 2014), and giving dishonest answers in the application context is contrary to these ideals. Therefore, conscientiousness is featured as a key antecedent in many faking theories (e.g., Levashina & Campion, 2006; Mueller-Hanson, Heggestad, & Thornton, 2006). Empirical studies usually show a negative relationship between conscientiousness and faking intentions or faking in job interviews (Buehl & Melchers,

2017; Lester et al., 2015; Roulin & Krings, 2016). In line with these arguments, we expect a negative relationship between individual-level conscientiousness and faking intentions.

H_4: Applicants with higher conscientiousness have lower faking intentions.

If there are many conscientious inhabitants in a region and individual-level conscientiousness is associated with faking, then there should also be a relationship between conscientiousness and faking at the aggregated level. Therefore, we expect a negative relationship between the macro-psychological conscientiousness level of a region and the average faking intentions of applicants from that region.

H_5: On average, applicants living in a region with a higher mean level of conscientiousness have lower faking intentions.

Competitive worldviews. In addition to job market-level competition, theories of faking have also discussed personal attitudes towards competition and competitive situations (e.g., Tett et al., 2006). More recently, Roulin, Krings and Binggeli (2016) described the effect of two types of competition: (a) attitudes toward competition, as the opportunity to compare oneself with others and learn from it, and (b) perceptions of the world as a competitive place (i.e., competitive worldviews). People with strong competitive worldviews see the world as a place where one has to fight for scarce resources and only the strongest succeed (Duckitt, 2001). Such worldviews are particularly relevant when competition with others is salient, such as when applying for a job. Furthermore, recent studies reported that applicants' competitive worldviews have a strong influence on faking intention and behaviors (Roulin & Bourdage, 2017; Roulin & Krings, 2016). In line with these arguments, we expect a positive relationship between individual-level competitive worldviews and faking intentions.

H_6: Applicants with higher competitive worldviews have higher faking intentions.

If a region contains many people with high levels of competitive worldviews and if individual-level competitive worldviews are associated with individual faking, there should also be a relationship between competitive worldviews and faking at the aggregated level. Thus,

we expect a positive relationship between the macro-psychological level of competitive worldviews of a region and the average faking intentions of applicants from that region.

H_7: On average, applicants living in a region with a higher mean level of competitive worldviews have higher faking intentions.

Religiosity. Another potential antecedent of faking intentions is applicants' religiosity. Although religiosity has been largely ignored in faking theories, there are reasons to argue for its relevance for faking. First, faking can be considered as a form of lying (e.g., Goffin & Boyd, 2009), behavior against which religious socialization should build a moral barrier. Most denominations explicitly reject lying, including Christianity: "Do not lie" (Leviticus 19:11, New International Version) and Islam: "And, do not cloak and confuse the truth with falsehood" (Quran 2:42, The Noble Quran). Indeed, Allmon, Page, and Roberts (2000) found that religious people differ in how they perceive and evaluate moral situations, and Shariff and Norenzayan (2011) reported a direct negative relationship between religiosity and deceptive behaviors. This socialized rejection of deception and lies likely carries over to the context of job applications and selection. Thus, we expect a negative relationship between the individual-level religiosity and faking intentions.

H_8: Applicants with higher religiosity have lower faking intentions.

If there are many religious inhabitants in some regions and individual-level religiosity is correlated with individual faking, then there should also be a relationship between religiosity and faking at the aggregated level. Therefore, we expect a negative relationship between the macro-psychological religiosity level of a region and the average faking intentions of applicants from that region.

H_9: On average, applicants living in a region with a higher mean level of religiosity have lower faking intentions.

Contextual Effects

The regional hypotheses discussed so far result from regional differences in individual-level predictors of faking and the aggregation of the corresponding individual-level effects. However, it is also possible that the macro-psychological characteristics of a region may have an effect that goes beyond this accumulated effect originating from the individual level. Macro-psychological factors may build up pressure on the individual to behave according to the prevailing characteristics. In this way, the regional context in which a person lives – the predominant characteristics of the other inhabitants of the region – may have an influence on the person's behavior independently of his/her own personality or attitudes.

All three macro-psychological characteristics we examine have the potential to affect a person's faking intentions beyond the effect originating from the individual-level. For instance, it is possible that if many people in a region have high competitive worldviews scores, there is also a greater perceived competitive pressure in this region. Applicants from such a region should be used to strong competition in many aspects of their lives. Such a perceived competitive pressure may lead to a greater willingness to fake. Thus, higher macro-psychological competitive worldviews in regions may lead to higher applicant faking intentions, independently of the applicant's individual competitive worldviews. Such contextual effects are also possible for conscientiousness and religiosity. Given that there are neither theoretical models nor empirical studies on the corresponding contextual effect for these variables, we take an exploratory approach here. Taken together, we ask whether there are contextual effects of competitive worldviews, conscientiousness, and religiosity beyond the effect aggregated from the individual level.

RQ_1: Is there a contextual effect of conscientiousness on individual faking intentions?

RQ_2: Is there a contextual effect of competitive worldviews on individual faking intentions?

RQ_3: Is there a contextual effect of religiosity on individual faking intentions?

Methods

Regions

Following previous socioecological psychology research (Obschonka et al., 2016), our regional data are based on the Metropolitan Statistical Areas (MSAs) of the United States of America. The U.S. Office of Management and Budget defines an MSA as an urbanized region with more than 50,000 inhabitants consisting of one or more counties with a high degree of social and economic integration (Mar, 2010). We collected data for the 50 MSAs with the most inhabitants; due to language differences, regions in the US insular areas (e.g., the region "San Juan-Carolina-Caguas" in Puerto Rico) were not included in our study. The MSAs were selected on the basis of the 2010 population figures and the regional boundaries of the MSAs redefined in the same year (U.S. Census Bureau, 2017).

Procedure

Data were collected using Amazon's Mechanical Turk (MTurk). We created a separate "HIT" (Human Intelligence Task) for each of the 50 MSAs to ensure an equal distribution of participants. Participants were paid U.S. $0.70. Participants conscientiousness, faking intentions, competitive worldviews and demographic data (including religiosity) were recorded in that order.

To address potential concerns about the quality of MTurk data (Cheung, 2013; Sharpe Wessling, Huber, & Netzer, 2017), we took a number of precautions. First, MTurk workers could only participate in the study if they had a U.S. account, had completed between 100 and 1,000,000 MTurk HITs, and had an approval rate of at least 70%. Second, we confirmed the location of participants by asking them to provide their ZIP code and eliminating them if it did not match the pre-specified MSA. In addition, we geo-localized the IP address of participants and eliminated those who did not match the ZIP code. Third, we used MTurk workers' unique identification number to remove participants who filled out the survey multiple times. This was necessary because distributing the data collection to one HIT per MSA made it technically

impossible to prevent participants from participating more than once. Finally, following suggestions in the literature (Curran, 2016; Huang, Bowling, Liu, & Li, 2014; Meade & Craig, 2012), we used an attention check item ("I have never used a computer", taken from Huang et al., 2014) and included it once at the beginning and once toward the end of the survey. Participants who did not answer both items correctly were excluded from our analysis.

Sample

Based on a power analysis, we aimed to collect usable data from 100 people for each MSA[3]. To achieve this, we slightly oversampled each MSA (i.e., up to 120 participants). Given that multilevel modeling does not require large sample sizes in the lower-level units (Maas & Hox, 2005), we did not exclude any MSA (mean *n* per MSA = 97.20, *SD* = 17.03, range from 50 to 119). In total, 6,881 MTurk workers attempted to participate in our study. We removed a total of 2,021 respondents based on the screening criteria described above. Our final data set thus included 4,860 participants from 50 MSAs, 57% of whom were women. The mean age was 34.4 years (*SD* = 10.70), 74.5% were White, 8.6% African American, 6.5% Asian or Pacific Islander, 6.3% Hispanic, and 0.4% Native Americans. Overall, 23.9% of participants had a high school leaving certificate and 73.4% a college or university degree. The vast majority of our participants (68.3%) were currently employed, 10.7% were self-employed, 34.6% were unemployed, and 9.2% described MTurk as their primary job. Most participants (50.5%) had one to three job interviews in the last year, 12.4% had more than three job interviews, and 37.1% had no job interview in the last year.

Measures

Faking intentions. We measured individual faking intentions (α = .92) with the 15-item scale from Roulin and Krings (2016), which is based on the *slight image creation* and *extensive image creation* subscales from Levashina and Campion (2007). Participants read the following

[3] This project is a stand-alone study, the data were not collected in the course of a larger data collection effort or a larger research project.

introduction: “Imagine that you have applied for a job in a company that you would very much like to work for. And imagine that you have been invited for a job interview. Please rate the extent to which you would be willing to use each strategy from the list below during your interview.” They were then presented with the item stem “If I were interviewing for this job today, I would be willing to...”, followed by items such as “...distort my work experience to fit the interviewer’s view of the position.” Participants answered on a 5-point scale from 1 = *to no extent* and 5 = *to a very great extent*.

Economic situation. Following the suggestions of the International Labour Organization of the United Nations (obtained from International Labour Office, 2016) and past research (Obschonka, Schmitt-Rodermund, Silbereisen, Gosling, & Potter, 2013; Rentfrow et al., 2013), we operationalized the regional-level economic situation with three indicators: (a) the annual change in the gross domestic product (GDP) (U.S. Census Bureau, 2017), (b) the annual change in the proportion of people living below the poverty line (U.S. Census Bureau, 2017), and (c) the annual change in the unemployment rate (U.S. Bureau of Labor Statistics, 2017). To avoid overweighting short-term regional fluctuations, the data of the last five years before the survey (2011 to 2015) were averaged (Obschonka et al., 2016, 2015). The poverty and unemployment rates were reverse-keyed, and all three indicators were standardized and then combined. Higher values correspond to a stronger economy in a region during the corresponding five-year period[4].

Crime rate. The regional-level crime rate was calculated from the crime statistics of the Federal Bureau of Investigation (United States Department of Justice, Federal Bureau of Investigation., 2017). These statistics are divided into data on violent crimes, such as murder and assault, and data on property crime, such as burglary and theft. To ensure a broad

[4] We also re-ran all analyses using all three indicators as individual predictors and found no changes in the results.

operationalization, we standardized and combined the two types of crimes and used data from the previous five years.

Conscientiousness. The individual-level conscientiousness was measured with the corresponding Big Five Inventory scale (BFI, see e.g., John, Naumann, & Soto, 2008). Sample items are "I see myself as someone who make plans and follow through with them" and "I see myself as someone who tends to be disorganized" (reverse coded), with nine items in total ($\alpha = .86$). The instructions for the participants were the following "Here are a number of characteristics that may or may not apply to you. Tell us how much you agree with each statement." Items were rated on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. Macro-psychological conscientiousness of an MSA was calculated by averaging the individual-level conscientiousness of participants from that MSA.

Competitive worldviews (CWs). We measured competitive worldviews using the 20-item ($\alpha = .91$) *Competitive-Jungle Social Worldview* scale (Duckitt, 2001). Sample items are "It's a dog-eat-dog world where you have to be ruthless at times" or "Winning is not the first thing; it's the only thing". The instructions for the participants were the following "To what extent do you agree with the following statements:". Items were again rated on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. Macro-psychological competitive worldviews of an MSA were calculated by averaging the individual-level competitive worldviews of participants from that MSA.

Religiosity. Individual-level religiosity was measured using a single item from the Gosling-Potter Internet Personality Project (for more information, see Rentfrow et al., 2008): "I consider myself to be...", with participants indicating their religiosity on a 7-point scale from 1 = *not at all religious* to 7 = *very religious*. The item is very similar to other established single-item measures of religiosity (e.g., "I see myself as someone who is very religious"; Gebauer et al., 2014). Gebauer, Nehrlich, Sedijides, and Neberich (2013) showed that such single-item measures are highly related to longer religiosity measures such as the Duke Religion Index

(Koenig, Parkerson, & Meador, 1997). In general, these types of religious measurements are considered to be effective (Norenzayan & Hansen, 2006) and have therefore been frequently used in other social-ecological studies (e.g., Bleidorn et al., 2016). Macro-psychological religiosity of an MSA was calculated by averaging the individual-level religiosity of participants from that MSA.

Results

Data Quality Checks

Search for outliers. We followed the recommendations by Aguinis, Gottfredson, and Joo (2013) on identifying and handling outliers. First, we checked for multi-construct outliers on the aggregated MSA level and found no conspicuous data points. Second, we tested for multi-construct outliers on the participant level. In accordance with the guidelines of Becker and Gather (1999), 48 participants had conspicuous Mahalanobis and leverage values. The removal of these 48 participants did not change the model fit, statistical significance, or conclusions in the following analyses. Since the proportion of such data points was less than one percent of the sample, we reported only the results without removing these cases. Third, we checked for prediction outliers on every step of the multi-level approach reported below and found no conspicuous values for the MSAs.

Representativeness of the data. To evaluate the representativeness of our regional predictor variables, we compared our regional means for conscientiousness and religiosity with the corresponding means form the Gosling-Potter Internet Personality Project (Rentfrow et al., 2008), a large-scale regional personality dataset that contains information for 1,855,306 people. These data can be regarded as "generally representative of the population at large" (Rentfrow et al., 2008, p. 348). The authors of the project provided us with the regional means for the 50 MSAs covered in our study. The MSA averages of our sample correlated with the results of this reference sample, at $r(48) = .34$, $p < .05$, for conscientiousness and $r(48) = .73$, $p < .05$, for

religiosity. As a further robustness check, we conducted our main analysis with the reference data instead of our own data. The results were similar for both datasets.

Data description. Figure IV.1 provides an overview of the distribution of our own data across the U.S. The map for conscientiousness shows a pattern similar to that found by Rentfrow and colleagues (2008): The regions in the south and southeast of the United States show the highest levels of conscientiousness. For religiosity, we found high values in the MSAs that lie in the Bible Belt of the USA, with the highest levels for the regions *Memphis* and *Dallas-Fort Worth-Arlington,* commonly known as the "buckle" of the Bible Belt (Garcia & Kruger, 2010; Stacey & Shupe, 1982). Table IV.1 presents the correlations, means and standard deviations of the study variables on both individual and regional level.[5]

[5] In this correlation matrix, the high positive correlation between macro-psychological religiosity and the regional crime rate is noticeable. Additional analyses showed that the regional poverty rate is a strong covariate in this context and that the relationship can be partially traced back to this covariate (partial correlation controlling for regional poverty rate = .36, $p < .05$).

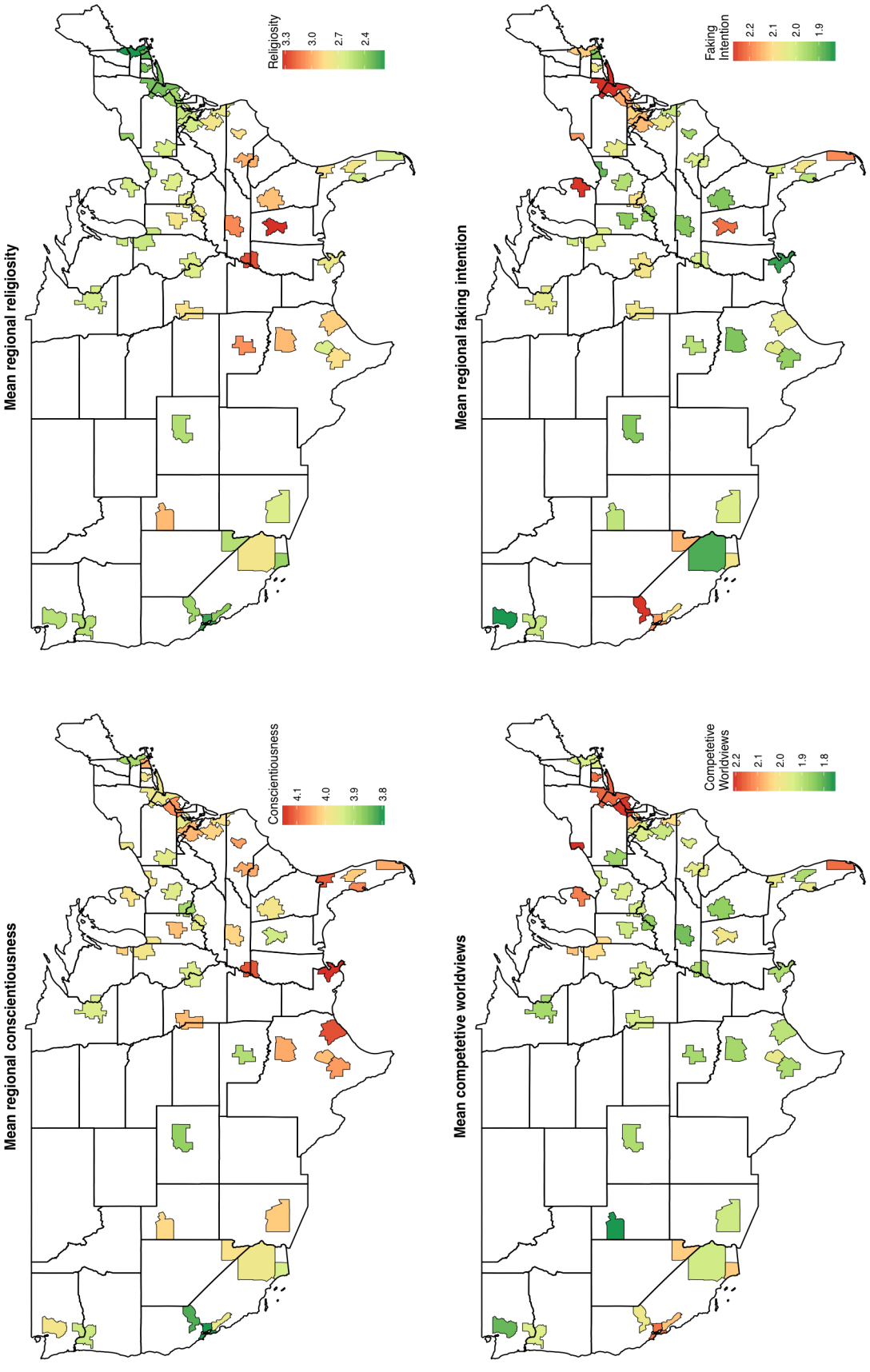

Figure IV.1. Maps of regional means.

Table IV.1

Means, Standard Deviations, and Correlations Among Main Variables

	Variable	*M* (*SD*)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	Individual-level variables											
1.	Faking intentions	2.04 (0.74)	(.92)									
2.	Conscientiousness	3.99 (0.70)	-.27**	(.86)								
3.	Competitive worldviews	1.97 (0.61)	.49**	-.23**	(.91)							
4.	Religiosity	3.07 (2.15)	-.12**	.17**	-.14**	-						
	Regional-level variables											
5.	Faking intentions	2.03 (0.11)	.15**	-.03	.12**	-.04**	-					
6.	Economic situation	-	-.01	-.03*	-.03	-.05**	-.01	-				
7.	Crime rate	-	-.02	.03*	-.02	.09**	-.10	-.29*	-			
8.	Conscientiousness	3.99 (0.07)	-.04*	.10**	-.02	.10**	-.30*	-.34*	.27	-		
9.	Competitive worldviews	1.97 (0.10)	.10**	-.01	.17**	-.06**	.68**	-.14	-.20	-.12	-	
10.	Religiosity	3.08 (0.46)	-.03	.05**	-.05**	.21**	-.20	-.28*	.49**	.49**	-.31*	-

Note. The numbers in the diagonal represent Cronbach's alpha of the scales. The correlations under the columns 1 – 4 are based on individual-level data with a sample size of $N = 4{,}860$. The correlations under the columns 5 – 10 are based on regional-level data with a sample size of $N = 50$. $^{*}p < .05$, $^{**}p < .01$.

Main Results

Test of Hypothesis 1. Figure IV.2 presents the regional-level means and confidence intervals of the study variables for the 50 MSAs. There are significant differences between the MSAs in individual faking intentions, $F(49, 4810) = 2.252$, $p < .01$, $\eta^2 = .022$, see also Figure IV.2, row 1. The regional grouping of faking intentions (within MSAs) explained 1.2% of the total variance of our dependent variable, ICC(1) = .012. This corresponds to an effect size expected from similar cross-country studies (Bryan & Jenkins, 2016) and satisfies the requirements for accurate model estimations (Bell, Morgan, Schoeneberger, Kromrey, & Ferron, 2014; Stegmueller, 2013). The comparison between a simple regression model and a multi-level regression model showed that a multi-level model can explain our data significantly better, likelihood ratio(1) = 21.36, $p < .01$. Taken together, these results support Hypothesis 1 and also indicate that a multi-level approach is appropriate for further analysis (Bliese, 2002; Hox, 2010).

Test of the other hypotheses. We followed recommendations from the multi-level analysis literature (Hox, 2010; Steele, 2008), and all analyses were performed with R 3.5.1 (R Core Team, 2018) and the package LME4 (Bates et al., 2018). To examine effects of both individual- and regional-level antecedents on individual faking intentions in one model, we centered individual predictors by regional group mean scores (i.e., group mean centering). The effects of group-mean centered predictors represent relationships between applicants' individual predictor scores and faking intentions within a region. The regional predictors were later introduced into the model as regional-level effects. These effects represent relationships between the mean predictor score in a region and faking intentions of an average applicant from that region. In addition, we centered all regional-level values by the total mean (grand mean centering) to make regression models easier to interpret. To prevent over-parameterization of

the models, we built and tested them in a step-by-step approach. To ensure comparability of the models, all models were calculated using maximum likelihood estimation.

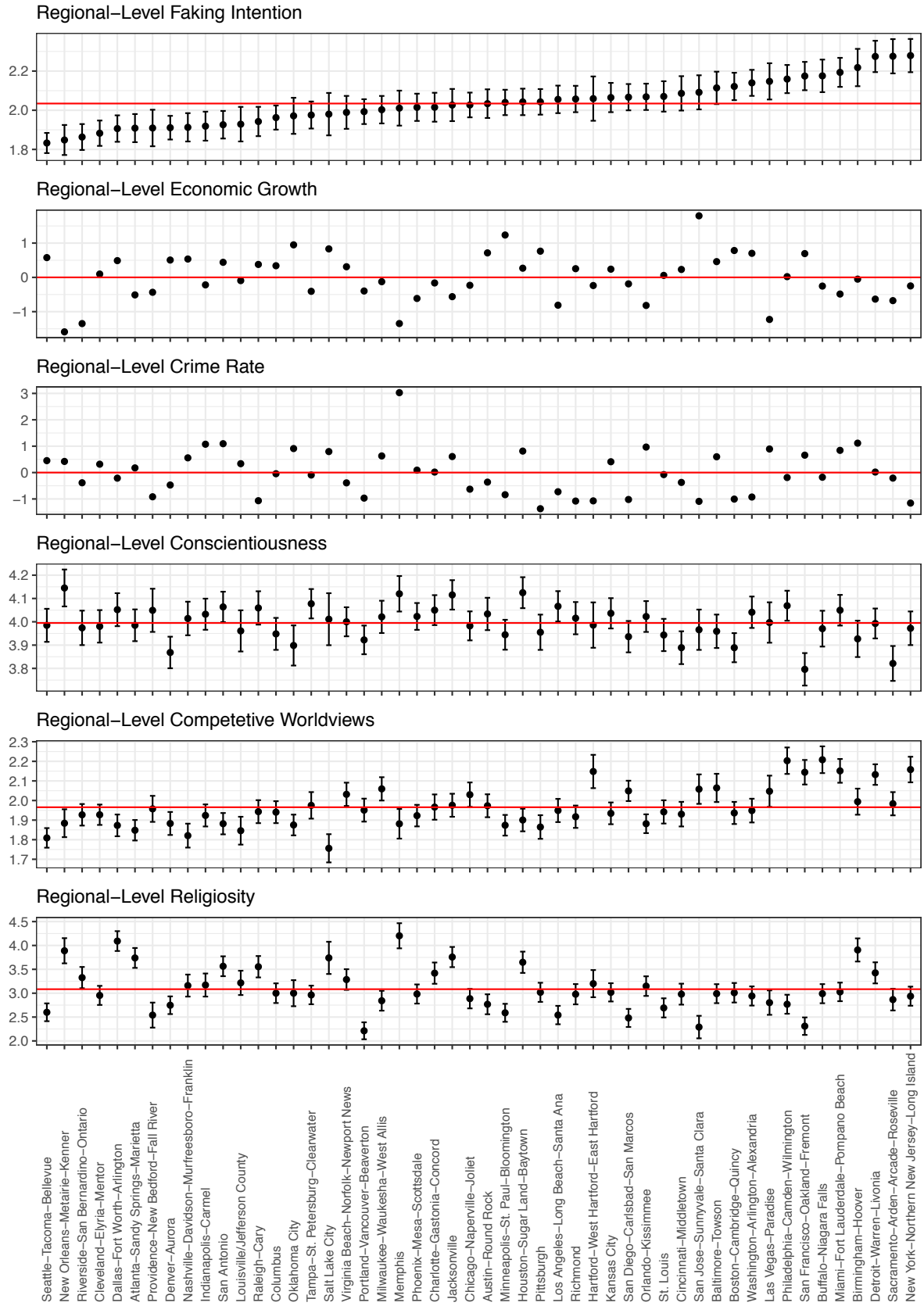

Figure IV.2. Means and confidence intervals for all 50 Metropolitan Statistical Areas.

The first step was a random intercept model for individual faking intentions (*AIC* = 10904.51, *Deviance* = 10898.51). In this and all subsequent models, the mean faking intentions in the different regions (MSAs) was treated as a random effect and was allowed to vary between regions. In a second step, we included individual-level predictors (*AIC* = 9414.46, *Deviance* = 9402.46). In a third step, the model was further extended to include regional-level predictors (*AIC* = 9383.62, *Deviance* = 9364.62) and predicted individual-level faking intentions significantly better than model 1, likelihood ratio(3) = 1496.05, $p < .01$, and model 2, likelihood ratio(5) = 37.85, $p < .01$. Model 3 explained 27.3% of the total variance in faking intentions. We also ran additional models with random slopes calculated for the regions, in which regression coefficients for individual-level predictors were allowed to vary between regions. These models did not demonstrate a better fit to the data.

In a final step, we recalculated model 3 using Restricted Maximum Likelihood Estimation, which leads to more conservative and less error-prone estimations of the parameters (Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). As the use of confidence intervals and *p*-values in multi-level analyses is somewhat controversial (Kuznetsova, Brockhoff, & Christensen, 2017), we employed the most conservative approaches to calculate these parameters: the Kenward-Roger approach to calculate two-tailed *p*-values and parameter bootstrapping to calculate confidence intervals (Luke, 2017). Our hypotheses ($H_1 – H_9$) were tested with an alpha level of .05. The test power for the research questions ($RQ_1 – RQ_3$) is considerably limited by the number of MSAs ($k = 50$) in our data set. Therefore, we use a more liberal alpha level of .10 to avoid overlooking interesting findings for these questions. Accordingly, effects with a *p*-value < .10 can be regarded as supporting our regional research questions.

The final model is shown in the first column of Table IV.2. At the individual level, our results suggest significant effects of conscientiousness ($\beta = -.17$, standardized $\beta = -.20$, $p < .001$), competitive worldviews ($\beta = .55$, *standardized* $\beta = .55$, $p < .001$), and religiosity

(β = -.01, *standardized* β = -.03, $p < .05$). In other words, applicants with higher religiosity and conscientiousness but lower competitive worldviews reported lower faking intentions. These results support all of our individual-level hypotheses (Hypotheses 4, 6 and 8). At the regional level, we found significant relationships between macro-psychological conscientiousness and average faking intentions (β = -.41, *standardized* β = -.04, $p < .05$) as well as macro-psychological competitive worldviews and average faking intentions (β = .77, *standardized* β = .11, $p < .001$). On average, applicants from regions with a higher macro-psychological conscientiousness reported lower faking intentions, whereas those from regions with higher macro-psychological competitive worldviews reported higher intentions, supporting Hypotheses 5 and 6. However, we found no effects for macro-psychological religiosity (β = .04, *standardized* β = .02, $p = .30$), economic development (β = .01, *standardized* β = *.01*, $p = .75$), or crime rate (β = .00, *standardized* β = .00, $p = .83$) in a region. Hypotheses 2, 3, and 9 were thus not supported.

The next step was to examine our research question: Can regional effects only be attributed to individual-level effects aggregated at the regional level or is there a contextual effect of the region in which people live? To evaluate such contextual effects, we re-centered the individual-level predictors by their overall mean score (grand mean centering) and re-fitted our final model. This procedure has no influence on the model fit of the final model or on the estimation or interpretation of the individual-level effects (Fielding, 2010; Kreft, de Leeuw, & Aiken, 1995). However, in this new model, the estimates for the regional-level effects represent the relationship between faking intention and macro-psychological conscientiousness, competitive worldviews and religiosity controlling for individual characteristics. The second column of *Table IV.2* shows the results of this grand-mean centered model. There was no longer a significant association of individual faking intentions with conscientiousness (β = -.24, *standardized* β = -.02, $p = .21$) or religiosity (β = .05, *standardized* β = .03, $p = .19$) at the

Table IV.2
Final Model With and Without Contextual Effects

	Final model without contextual effects				Final model with contextual effects			
	β	*CI*	*stand.* β	*p*	β	*CI*	*stand.* β	*p*
Regional Level								
(Intercept)	2.04	2.02 – 2.06		**<.001**	2.04	2.02 – 2.06		**<.001**
Economic situation	0.01	-0.02 – 0.04	0.01	.749	0.01	-0.02 – 0.04	0.01	.749
Crime rate	0.00	-0.02 – 0.03	0.00	.830	0.00	-0.02 – 0.03	0.00	.830
Conscientiousness	-0.41	-0.71 – -0.09	-0.04	**.034**	-0.24	-0.54 – 0.09	-0.02	.214
CWs	0.77	0.60 – 0.98	0.11	**<.001**	0.22	0.04 – 0.43	0.03	**.074**
Religiosity	0.04	-0.02 – 0.09	0.02	.302	0.05	-0.01 – 0.10	0.03	.188
Individual Level								
Conscientiousness	-0.17	-0.20 – -0.15	-0.16	**<.001**	-0.17	-0.20 – -0.15	-0.16	**<.001**
CWs	0.55	0.52 – 0.58	0.44	**<.001**	0.55	0.52 – 0.58	0.45	**<.001**
Religiosity	-0.01	-0.02 – -0.00	-0.03	**.021**	-0.01	-0.02 – 0.00	-0.03	**.021**
N_{MSA}	50							
Observations	4,860							
Marginal R^2	.273							
Conditional R^2	.277							
AIC	9,438.352							
Deviance	9,364.985							

Note. The model on the left is based on group mean centered individual-level variables; the model on the right on grand-mean centered individual-level variables. *Stand.* β = *standardized* β; *CI* = .90% bootstrapped confidence intervals based on 1,000 samples. CWs = competitive worldviews; AIC = Akaike information criterion. *p* = two-tailed 5% *p*-values bases on Kenward-Roger's approach; *p*-values below the 5% criterion for our hypotheses ($H_1 – H_9$) and below the 10% criterion for our research questions ($RQ_1 – RQ_3$) are printed in bold.

regional level. Consequently, there is no evidence of contextual effects of conscientiousness (Research Question 1) or religiosity (Research Question 3). For competitive worldviews, the results suggested a significant effect at the regional level (β = 1.22, *standardized* β = .03, *p* = .07). These results support a contextual effect of macro-psychological competitive worldviews that goes beyond the association stemming from the individual level. In summary, applicants from a region with higher macro-psychological competitive worldviews have, on average, higher faking intentions (Hypotheses 6), and this effect can be partly attributed to the individual-level relation between competitive worldviews and faking intentions. However, an

effect of the macro-psychological competitive worldviews also emerges when controlling for the individual-level effect (Research Question 2). In other words, a person with a given competitive worldviews score will, on average, have higher faking intentions if he or she lives in a region with higher mean competitive worldviews.

In a final step, we investigated how much of the variance in faking intentions between the 50 MSAs (see Hypothesis 1) can be explained by our regional predictors. When adding all five regional-level predictors, the variance between MSAs on our dependent variable dropped by 65.6% - from ICC(1) = .012 to ICC(1) = .004. A successive comparison of models, each with a single regional variable, revealed that macro-psychological competitive worldviews is by far the strongest predictor of regional faking intentions and can explain 64.2% of the variance alone.

Discussion

Our study is the first to demonstrate regional differences in faking intentions: Applicant's environment significantly contributes to their faking intentions. This finding complements cross-country research (e.g., by Fell et al., 2016; Sandal et al., 2014) and shows that differences found between applicants of various regions of the world also exist on a much smaller regional level, i.e. within a country and a shared national cultural and institutional framework. Such differences are also consistent with previous socioecological psychology research, for instance about personality, attitudes, and behaviors (e.g., Audretsch et al., 2017; Gebauer et al., 2014; Rentfrow et al., 2008). However, individual differences between applicants account for the majority of the overall variance in faking intentions, which is in line with the majority of faking theories. Concerning individual-level predictors, we replicated effects observed in previous studies for conscientiousness (Lester et al., 2015; Roulin & Krings, 2016) and competitive worldviews (Roulin & Krings, 2016). In accordance with previous studies on unethical or dishonest behaviors (Allmon et al., 2000; Norenzayan & Hansen, 2006),

we found that applicants' religiosity – a factor so far overlooked in applicant faking research – was negatively associated with faking intentions.

Theoretical Implications

The substantial relationships between macro-psychological conscientiousness and competitive worldviews in a region and the corresponding average faking intentions of applicants from that region indicate that there is a whole class of parameters associated with faking that has not yet been considered. While past research showed that faking is related to individual-level conscientiousness (e.g., Buehl & Melchers, 2017; Lester et al., 2015) and competitive worldviews (e.g., Roulin & Krings, 2016), our study found similar effects when aggregated on a regional level, according to macro-psychological characteristics. Our non-significant findings regarding more objective regional indicators, like the economic situation in a region, are aligned with findings from cross-cultural faking research which reported effects for cultural values and norms but not for economic factors such as the unemployment rate of a country (Fell et al., 2016; Sandal et al., 2014). In view of other socioecological psychology research, which has regularly demonstrated an impact of regional factors on regional behavior trends (e.g., Block et al., 2018), it might seem surprising that we found no effects for faking. Our findings can potentially be explained by differences in social safety nets between the regions, which may moderate the link between unemployment and faking (Fell & König, 2016). Another possible explanation is that a region's abstract economic situation and crime rate are still too far-removed from people's everyday lives. Serious criminality or a fragile economy in a region may only be sufficient to trigger unethical behaviors like faking if an applicant is directly affected by the consequences (e.g., if relevant jobs are scarce).

In our analyses, we found a contextual effect of competitive worldviews on individual faking intentions, which was a purely regional effect. In contrast to conscientiousness, the relationship between macro-psychological competitive worldviews and faking intentions of an average applicant from a region cannot be explained solely by cumulating the effect from the

individual level: Someone with a given level of competitive worldviews will, on average, have higher faking intentions if he or she lives in a region with higher mean competitive worldviews. To date, such contextual effects have − if at all − mainly been shown in educational research (e.g., Chiu & Chow, 2015), and the present study is the first to demonstrate contextual effects in the field of I/O psychology.

This contextual effect can potentially be explained by the fact that a high macro-psychological level of competitive worldviews might be salient for all inhabitants of a region. If many people in a region have a rather competitive view of the world, this should be reflected in the fact that many people behave more competitively. As a result, perceived competition for resources (such as jobs) will, on average, be fiercer in this region than in other regions, regardless of the actual regional economic situation. Residents of this region are more often exposed to a dog-eat-dog mentality of others and in order to succeed in such an environment, they are forced to act competitively as well, irrespective of their own attitude toward competition. Competition is particularly salient in selection processes, as there are usually many competitors (applicants) for very limited resources (jobs). In such a situation, applicants from a region with a high macro-psychological level of competitive worldviews should assume that the other applicants will do whatever it takes to be successful. Consequently, they should also jump on the bandwagon and use every opportunity to gain an advantage, including faking in a selection interview.

This explanation for the contextual effect of competitive worldviews mentioned here can also be easily embedded into previous faking theories. For example, the "dynamic model of applicant faking" proposed by Roulin et al (2016) explicitly mentions "perceived competition" as an influencing factor of faking. According to these authors, this factor causes applicants to believe that NOT faking will lead to a competitive disadvantage because everybody else is using such a tactic. The contextual effect of competitive worldviews on faking can thus be seen as an expression of the perceived competition in a region.

Future Research Directions

Our promising results as well as the findings from Jiang and Probst (2017) demonstrate that a social-ecological research approach can be fruitful in I/O psychology research. We therefore hope to pave the way for further research that takes into account regional differences. The presence of contextual effects highlights a category (or level) of predictors that should not be ignored in I/O psychology research. In the context of selection or assessment, for example, meaningful regional differences in applicants' traits and attitudes may also lead to different criterion-related validities for selection procedures. Future research could also examine organizations' perspectives with regard to regional differences in faking. For instance, do hiring managers believe that applicants from certain regions are more or less willing to fake? And are these beliefs in alignment with the "real" regional distribution of faking intentions?

A further prospect for future research is to focus on the influence of competitive worldviews, which were an important predictor of faking in the present study. However, selection situations are just one of many competitive situations in everyday working life. Similar effects of competitive worldviews may be expected, for instance, in terms of fighting for promotion or achieving sales goals. In this context, it would also be interesting to investigate whether competitive worldviews affect only behavior or also the resulting work performance. People who are used to fighting with no holds barred may not automatically reach their goals faster or better. Furthermore, future studies should look at whether competitive worldviews are associated with the experience of stress at work. Potentially, employees with higher competitive worldviews may experience less stress in competitive work situations, as they often see themselves under competitive pressure and are therefore accustomed to it.

Implications for Personnel Selection

Given the assumption that many companies recruit their personnel from different regions of a country (Ruhs & Anderson, 2010), these companies should be aware of existing regional differences in faking intentions (i.e., applicants from certain regions have higher faking

intentions than applicants from other regions). In extreme cases, such systematic differences between applicants from different regions in terms of attitudes and intentions regarding faking could lead to corresponding distortions of personnel selection decisions. However, while the differences we found in this study were significant, the size of regional effects was rather small (1.2% of empirical variance; $\eta^2 = .022$). Such effect sizes are similar to previous socioecological psychology research (Bryan & Jenkins, 2016). And, individual faking intentions can be attributed to a much larger extent to applicants' individual characteristics (26.1% of empirical variance). Therefore, organizations concerned with applicant faking might be better advised to focus on these individual factors. Moreover, it is important to emphasize that regional differences are complex in nature and that their effects can only be fully understood if the underlying sociodemographic and macro-psychological differences are taken into account. In accordance with recommendations of Bartunek and Rynes (2010) regarding the formulation of practical implications, and in view of the sparse research in this area, we would therefore strongly advise against a direct consideration of the assumed regional differences in applicant faking (e.g., by introducing a penalty system for applicants from regions that are on average prone to faking).

Regarding the individual determinants, our findings provide additional evidence for the central role played by competitive worldviews for applicant faking. In line with Roulin and Krings (2016), we therefore recommend that organizations play down the competitive aspects of selection when addressing applicants (instead of emphasizing them for instance). In addition, because competitive worldviews are particularly relevant in situations when competition between individuals is made salient, it might be best to ensure that applicants are not assessed together in the same location. For instance, organizations could schedule interviews so that applicants for a particular position do not meet while waiting. Alternatively, online video interviews may be another way to address this issue for companies interviewing applicants from across the country. Video interviews may not only make competition less salient and thus

reduce applicants' faking, but they can reduce travel costs and time losses for applicants, which may also increase the applicant pool for the hiring organization.

Limitations

Four main limitations of the present study need to be mentioned. First, we measured applicants' faking intentions and not their faking behaviors. Although faking intentions are widely seen as a direct precursor of actual faking behaviors (McFarland & Ryan, 2006; Roulin & Krings, 2016), future research should examine faking behaviors in this context. This could be done, for instance, using subtle or indirect approaches to capture faking, such as overclaiming questionnaires or bogus items. Second, due to the limited number of MTurk workers in smaller MSAs, we had to focus on the 50 largest MSAs. Therefore, systematic differences in faking between MSAs of different sizes cannot be excluded. In this case, our data may be range restricted and we may therefore underestimate the regional effects on faking. Future research should therefore also try to collect data in small regions. Third, we evaluated our research questions ($RQ_1 - RQ_3$) based on a more liberal alpha level of .10, which may increase the chances of a type I error. This was justified by the exploratory nature of these questions and the limited test power due to the small number of MSAs ($k = 50$) (see Bradley and Brand 2013 for an overview of expected alpha values as a function of sample size, effect size and power). Yet, these findings should be replicated in future research. Fourth, the data collection via MTurk also constitutes a possible limitation of our study. Researchers have raised arguments both for (e.g., Buhrmester, Kwang, & Gosling, 2011; Hauser & Schwarz, 2016; Landers & Behrend, 2015) and against (e.g., Chandler & Paolacci, 2017; Hydock, 2018; Sharpe Wessling et al., 2017) the use of MTurk for data collection. Although we cannot completely eliminate low-quality responses, we did take the most sophisticated precautions to address potential problems: We also rigorously screened for careless responders (Huang et al., 2014) and outliers (Aguinis et al., 2013; Becker & Gather, 1999). In addition, to the best of our

knowledge, this is the first study to use an IP-based geo-blocking system to eliminate shortcomings concerning the regional representativeness of the MTurk sampling process.

Conclusion

This study attempted to introduce a socioecological psychology approach to the field of I/O psychology, and specifically to faking in job interviews. We examined inhabitants from various major regions of the U.S., thereby extending cross-cultural faking research by focusing on regions within countries. We found differences between applicants from various regions not only for faking but also for other selection-relevant characteristics like competitive worldviews. Finally, we call for further I/O research following a socioecological psychology approach as well as deeper exploration of the construct of competitive worldviews and its role in the workplace.

References

Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods*, *16*, 270–301. https://doi.org/10.1177/1094428112470848

Allmon, D. E., Page, D., & Roberts, R. (2000). Determinants of perceptions of cheating: Ethical orientation, personality and demographics. *Journal of Business Ethics*, *23*, 411–422. https://doi.org/10.1023/A:1006087104087

Audretsch, D. B., Obschonka, M., Gosling, S. D., & Potter, J. (2017). A new perspective on entrepreneurial regions: Linking cultural identity with latent and manifest entrepreneurship. *Small Business Economics*, *48*, 681–697. https://doi.org/10.1007/s11187-016-9787-9

Bangerter, A., Roulin, N., & Koenig, C. J. (2012). Personnel selection as a signaling game. *Journal of Applied Psychology*, *97*, 719–738. https://doi.org/10.1037/a0026078

Bartunek, J. M., & Rynes, S. L. (2010). The construction and contributions of "Implications for Practice": What's in them and what might they offer? *Academy of Management Learning & Education*, *9*, 100–117. https://doi.org/10.5465/AMLE.2010.48661194

Bates, D., Maechler, M., Bolker, B., Walker, S., Christensen, R. H. B., Singmann, H., … Green, P. (2018). lme4: Linear Mixed-Effects Models using "Eigen" and S4 (Version 1.1-17). Retrieved from https://CRAN.R-project.org/package=lme4

Becker, C., & Gather, U. (1999). The masking breakdown point of multivariate outlier identification rules. *Journal of the American Statistical Association*, *94*, 947–955. https://doi.org/10.2307/2670009

Bell, B. A., Morgan, G. B., Schoeneberger, J. A., Kromrey, J. D., & Ferron, J. M. (2014). How low can you go? *Methodology*, *10*, 1–11. https://doi.org/10.1027/1614-2241/a000062

Beugelsdijk, S., & Klasing, M. J. (2016). Diversity and trust: The role of shared values. *Journal of Comparative Economics*, *44*, 522–540. https://doi.org/10.1016/j.jce.2015.10.014

Bleidorn, W., Schönbrodt, F., Gebauer, J. E., Rentfrow, P. J., Potter, J., & Gosling, S. D. (2016). To live among like-minded others exploring the links between person-city personality fit and self-esteem. *Psychological Science*, *27*, 419–427. https://doi.org/10.1177/0956797615627133

Bliese, P. D. (2002). Multilevel random coefficient modeling in organizational research: Examples using SAS and S-PLUS. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (1st ed., pp. 401–445). San Francisco, CA: Jossey-Bass.

Block, J. H., Fisch, C. O., Lau, J., Obschonka, M., & Presse, A. (2018). How do labor market institutions influence the preference to work in family firms? A multilevel analysis

across 40 countries. *Entrepreneurship Theory and Practice*, 1–27. https://doi.org/10.1177/1042258718765163

Blyth, C. R. (1972). On Simpson's Paradox and the sure-thing principle. *Journal of the American Statistical Association*, *67*, 364–366. https://doi.org/10.2307/2284382

Bradley, M. T., & Brand, A. (2013). Alpha values as a function of sample size, effect size, and power: Accuracy over inference. *Psychological Reports*, *112*, 835–844. https://doi.org/10.2466/03.49.PR0.112.3.835-844

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Bryan, M. L., & Jenkins, S. P. (2016). Multilevel modelling of country effects: A cautionary tale. *European Sociological Review*, *32*, 3–22. https://doi.org/10.1093/esr/jcv059

Buehl, A.-K., & Melchers, K. G. (2017). Individual difference variables and the occurrence and effectiveness of faking behavior in interviews. *Frontiers in Psychology*, *8*, 1–15. https://doi.org/10.3389/fpsyg.2017.00686

Buehl, A.-K., Melchers, K. G., Macan, T., & Kühnel, J. (2019). Tell me sweet little lies: How does faking in interviews affect interview scores and interview validity? *Journal of Business and Psychology*, *34*, 107–124. https://doi.org/10.1007/s10869-018-9531-3

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*, 3–5. https://doi.org/10.1177/1745691610393980

Buonanno, P., Montolio, D., & Vanin, P. (2009). Does social capital reduce crime? *The Journal of Law and Economics*, *52*, 145–170. https://doi.org/10.1086/595698

Chalfant, H. P., & Heller, P. L. (1991). Rural/Urban versus regional differences in religiosity. *Review of Religious Research*, *33*, 76–86. https://doi.org/10.2307/3511262

Chandler, J. J., & Paolacci, G. (2017). Lie for a dime: When most prescreening responses are honest but most study participants are impostors. *Social Psychological and Personality Science*, *8*, 500–508. https://doi.org/10.1177/1948550617698203

Cheung, M. W.-L. (2013). Fixed- and random-effects meta-analytic structural equation modeling: Examples and analyses in R. *Behavior Research Methods*, *46*, 29–40. https://doi.org/10.3758/s13428-013-0361-y

Chiu, M. M., & Chow, B. W.-Y. (2015). Classmate characteristics and student achievement in 33 countries: Classmates' past achievement, family socioeconomic status, educational resources, and attitudes toward reading. *Journal of Educational Psychology*, *107*, 152–169. https://doi.org/10.1037/a0036897

Christiansen, N. D., Goffin, R. D., Johnston, N. G., & Rothstein, M. G. (1994). Correction the 16PF for faking: Effects on criterion-related validity and individual hiring decisions. *Personnel Psychology*, *47*, 847–860. https://doi.org/10.1111/j.1744-6570.1994.tb01581.x

Clemens, M. A. (2011). Economics and emigration: Trillion-dollar bills on the sidewalk? *Journal of Economic Perspectives*, *25*, 83–106. https://doi.org/10.1257/jep.25.3.83

Curran, P. G. (2016). Methods for the detection of carelessly invalid responses in survey data. *Journal of Experimental Social Psychology*, *66*, 4–19. https://doi.org/10.1016/j.jesp.2015.07.006

Currie, J., DellaVigna, S., Moretti, E., & Pathania, V. (2010). The Effect of fast food restaurants on obesity and weight gain. *American Economic Journal: Economic Policy*, *2*, 32–63. https://doi.org/10.3386/w14721

Donovan, J. J., Dwight, S. A., & Schneider, D. (2014). The impact of applicant faking on selection measures, hiring decisions, and employee performance. *Journal of Business and Psychology*, *29*, 479–493. https://doi.org/10.1007/s10869-013-9318-5

Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. *Advances in Experimental Social Psychology*, *33*, 41–113. https://doi.org/10.1016/S0065-2601(01)80004-6

Ellingson, J. E. (2012). People fake only when they need to fake. In M. Ziegler, C. MacCann, & R. D. Roberts (Eds.), *New perspectives on faking in personality assessment* (1st ed., pp. 19–33). New York, NY: Oxford University Press.

Ellingson, J. E., & McFarland, L. A. (2011). Understanding faking behavior through the lens of motivation: An application of VIE theory. *Human Performance*, *24*, 322–337. https://doi.org/10.1080/08959285.2011.597477

Evans, P. (2010). *The global challenge: International human resource management*. New York, NY: McGraw-Hill Higher Education.

Fan, C. C., & Casetti, E. (1994). The spatial and temporal dynamics of US regional income inequality, 1950–1989. *The Annals of Regional Science*, *28*, 177–196. https://doi.org/10.1007/BF01581768

Fell, C. B., & König, C. J. (2016). Cross-cultural differences in applicant faking on personality tests: A 43-Nation study. *Applied Psychology: An International Review*, *65*, 671–717. https://doi.org/10.1111/apps.12078

Fell, C. B., König, C. J., & Kammerhoff, J. (2016). Cross-cultural differences in the attitude toward applicants' faking in job interviews. *Journal of Business and Psychology*, *31*, 65–85. https://doi.org/10.1007/s10869-015-9407-8

Fielding, A. (2010). *Module 8: Multilevel modelling in practice: Research questions, data preparation and analysis*. Retrieved from http://www.cmm.bris.ac.uk/lemma/

Fisman, R., & Miguel, E. (2007). Corruption, norms, and legal enforcement: Evidence from diplomatic parking tickets. *Journal of Political Economy*, *115*, 1020–1048. https://doi.org/10.1086/527495

Garcia, J. R., & Kruger, D. J. (2010). Unbuckling in the Bible Belt: Conservative sexual norms lower age at marriage. *Journal of Social, Evolutionary, and Cultural Psychology*, *4*, 206–214. https://doi.org/10.1037/h0099288

Gebauer, J. E., Bleidorn, W., Gosling, S. D., Rentfrow, P. J., Lamb, M. E., & Potter, J. (2014). Cross-cultural variations in Big Five relationships with religiosity: A sociocultural motives perspective. *Journal of Personality and Social Psychology*, *107*, 1064–1091. https://doi.org/10.1037/a0037683

Gebauer, J. E., Nehrlich, A. D., Sedikides, C., & Neberich, W. (2013). The psychological benefits of income are contingent on individual-level and culture-level religiosity. *Social Psychological and Personality Science*, *4*, 569–578. https://doi.org/10.1177/1948550612469819

Georgiadis, T., & Christopoulos, G. (2017). Gender inequalities in labour market outcomes: Evidence for Greek regions before and throughout the crisis. *International Journal of Manpower*, *38*, 675–695. https://doi.org/10.1108/IJM-11-2015-0198

Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science*, *20*, 393–398. https://doi.org/10.1111/j.1467-9280.2009.02306.x

Goffin, R. D., & Boyd, A. C. (2009). Faking and personality assessment in personnel selection: Advancing models of faking. *Canadian Psychology*, *50*, 151–160. https://doi.org/10.1037/a0015946

Griffith, R. L., Chmielowski, T., & Yoshita, Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behavior. *Personnel Review*, *36*, 341–355. https://doi.org/10.1108/00483480710731310

Griffith, R. L., Lee, L. M., Peterson, M. H., & Zickar, M. J. (2011). First dates and little white lies: A trait contract classification theory of applicant faking behavior. *Human Performance*, *24*, 338–357. https://doi.org/10.1080/08959285.2011.597475

Gurven, M. D. (2018). Broadening horizons: Sample diversity and socioecological theory are essential to the future of psychological science. *Proceedings of the National Academy of Sciences*, *115*, 11420–11427. https://doi.org/10.1073/pnas.1720433115

Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods*, *48*, 400–407. https://doi.org/10.3758/s13428-015-0578-z

Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.

Hogue, M., Levashina, J., & Hang, H. (2013). Will I fake it? The interplay of gender, machiavellianism, and self-monitoring on strategies for honesty in job interviews. *Journal of Business Ethics*, *117*, 399–411. https://doi.org/10.1007/s10551-012-1525-x

Hox, J. J. (2010). *Multilevel analysis: Techniques and applications* (2nd ed.). New York, NY: Routledge.

Huang, J. L., Bowling, N. A., Liu, M., & Li, Y. (2014). Detecting insufficient effort responding with an infrequency scale: Evaluating validity and participant reactions. *Journal of Business and Psychology*, *30*, 299–311. https://doi.org/10.1007/s10869-014-9357-6

Hydock, C. (2018). Assessing and overcoming participant dishonesty in online data collection. *Behavior Research Methods*, *50*, 1563–1567. https://doi.org/10.3758/s13428-017-0984-5

International Labour Office. (2016). *Key indicators of the labour market* (9th ed.). Geneva, Switzerland.

Jiang, L., & Probst, T. M. (2017). The rich get richer and the poor get poorer: Country- and state-level income inequality moderates the job insecurity-burnout relationship. *Journal of Applied Psychology*, *102*, 672–681. https://doi.org/10.1037/apl0000179

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy. In O. P. John, R. W. Robins, & L. A. Pervin, *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York, NY: Guilford Press.

Koenig, H., Parkerson, G. R., & Meador, K. G. (1997). Religion index for psychiatric research: A five-item measure for use in health outcome studies. *The American Journal of Psychiatry*, *154*, 885–886. https://doi.org/10.1176/ajp.154.6.885b

König, C. J., Hafsteinsson, L. G., Jansen, A., & Stadelmann, E. H. (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. https://doi.org/10.1111/j.1468-2389.2011.00562.x

König, C. J., Wong, J., & Cen, G. (2012). How much do chinese applicants fake? *International Journal of Selection and Assessment*, *20*, 247–250. https://doi.org/10.1111/j.1468-2389.2012.00596.x

Kreft, I. G. G., de Leeuw, J., & Aiken, L. S. (1995). The effect of different forms of centering in hierarchical linear models. *Multivariate Behavioral Research*, *30*, 1–21. https://doi.org/10.1207/s15327906mbr3001_1

Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest Package: Tests in linear mixed effects models. *Journal of Statistical Software*, *82*, 1–26. https://doi.org/10.18637/jss.v082.i13

Landers, R. N., & Behrend, T. S. (2015). An inconvenient truth: Arbitrary distinctions between organizational, Mechanical Turk, and other convenience samples. *Industrial and Organizational Psychology*, *8*, 142–164. https://doi.org/10.1017/iop.2015.13

Lester, C., Anglim, J., & Fullarton, C. (2015). Individual differences in intention to fake job interviews: Personality, self-monitoring, and the theory of planned behaviour. *Australasian Journal of Organisational Psychology*, *8*, 1–11. https://doi.org/10.1017/orp.2015.7

Levashina, J., & Campion, M. A. (2006). A model of faking likelihood in the employment interview. *International Journal of Selection and Assessment*, *14*, 299–316. https://doi.org/10.1111/j.1468-2389.2006.00353.x

Levashina, J., & Campion, M. A. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology*, *92*, 1638–1656. https://doi.org/10.1037/0021-9010.92.6.1638

Levashina, J., Morgeson, F. P., & Campion, M. A. (2009). They don't do it often, but they do it well: Exploring the relationship between applicant mental abilities and faking. *International Journal of Selection and Assessment*, *17*, 271–281. https://doi.org/10.1111/j.1468-2389.2009.00469.x

Levashina, J., Morgeson, F. P., & Campion, M. A. (2012). Tell me some more: Exploring how verbal ability and item verifiability influence responses to biodata questions in a high-stakes selection context. *Personnel Psychology*, *65*, 359–383. https://doi.org/10.1111/j.1744-6570.2012.01245.x

Luke, S. G. (2017). Evaluating significance in linear mixed-effects models in R. *Behavior Research Methods*, *49*, 1494–1502. https://doi.org/10.3758/s13428-016-0809-y

Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology*, *1*, 86–92. https://doi.org/10.1027/1614-1881.1.3.86

Mar, V. (2010). Office of Management and Budget: 2010 Standards for delineating metropolitan and micropolitan statistical areas. *Federal Register*, *75*, 37245–37252.

Marcus, B. (2009). 'Faking' from the applicant's perspective: A theory of self-presentation in personnel selection settings. *International Journal of Selection & Assessment*, *17*, 417–430. https://doi.org/10.1111/j.1468-2389.2009.00483.x

McCrae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins's circumplex and the five-factor model. *Journal of Personality and Social Psychology*, *56*, 586–595. https://doi.org/10.1037/0022-3514.56.4.586

McFarland, L. A., & Ryan, A. M. (2000). Variance in faking across noncognitive measures. *Journal of Applied Psychology*, *85*, 812–821. https://doi.org/10.1037/0021-9010.85.5.812

McFarland, L. A., & Ryan, A. M. (2006). Toward an integrated model of applicant faking behavior. *Journal of Applied Social Psychology*, *36*, 979–1016. https://doi.org/10.1111/j.0021-9029.2006.00052.x

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, *17*, 437–455. https://doi.org/10.1037/a0028085

Minkov, M. (2009). Predictors of differences in subjective well-being across 97 nations. *Cross-Cultural Research*, *43*, 152–179. https://doi.org/10.1177/1069397109332239

Minkov, M., & Hofstede, G. (2012). Is national culture a meaningful concept? Cultural values delineate homogeneous national clusters of in-country regions. *Cross-Cultural Research*, *46*, 133–159. https://doi.org/10.1177/1069397111427262

Minkov, M., & Hofstede, G. (2014). Clustering of 316 european regions on measures of values: Do europe's countries have national cultures? *Cross-Cultural Research*, *48*, 144–176. https://doi.org/10.1177/1069397113510866

Mueller-Hanson, R. A., Heggestad, E. D., & Thornton, G. C., III. (2006). Individual differences in impression management: An exploration of the psychological processes underlying faking. *Psychology Science*, *48*, 288–312.

Norenzayan, A., & Hansen, I. G. (2006). Belief in supernatural agents in the face of death. *Personality and Social Psychology Bulletin*, *32*, 174–187. https://doi.org/10.1177/0146167205280251

Obschonka, M., Schmitt-Rodermund, E., Silbereisen, R. K., Gosling, S. D., & Potter, J. (2013). The regional distribution and correlates of an entrepreneurship-prone personality profile in the United States, Germany, and the United Kingdom: A

socioecological perspective. *Journal of Personality and Social Psychology*, *105*, 104–122. https://doi.org/10.1037/a0032275

Obschonka, M., Stuetzer, M., Audretsch, D. B., Rentfrow, P. J., Potter, J., & Gosling, S. D. (2016). Macropsychological factors predict regional economic resilience during a major economic crisis. *Social Psychological and Personality Science*, *7*, 95–104. https://doi.org/10.1177/1948550615608402

Obschonka, M., Stuetzer, M., Gosling, S. D., Rentfrow, P. J., Lamb, M. E., Potter, J., & Audretsch, D. B. (2015). Entrepreneurial regions: Do macro-psychological cultural characteristics of regions help solve the "Knowledge Paradox" of economics? *PLOS ONE*, *10*, 1–21. https://doi.org/10.1371/journal.pone.0129332

Obschonka, M., Stuetzer, M., Rentfrow, P. J., Shaw-Taylor, L., Satchell, M., Silbereisen, R. K., … Gosling, S. D. (2018). In the shadow of coal: How large-scale industries contributed to present-day regional differences in personality and well-being. *Journal of Personality and Social Psychology*, *115*, 903–927. https://doi.org/10.1037/pspp0000175

Oishi, S. (2014). Socioecological psychology. *Annual Review of Psychology*, *65*, 581–609. https://doi.org/10.1146/annurev-psych-030413-152156

Oishi, S., & Graham, J. (2010). Social ecology: Lost and found in psychological science. *Perspectives on Psychological Science*, *5*, 356–377. https://doi.org/10.1177/1745691610374588

Pandey, J. (1986). Socio-cultural perspectives on ingratiation. In B. A. Maher & W. B. Maher (Eds.), *Progress in experimental personality research* (pp. 205–229). New York, NY: Academic Press.

R Core Team. (2018). *R: A language and environment for statistical computing (Version 3.5.1)* [En]. Retrieved from http://www.R-project.org/

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (Vol. 1). Thousand Oaks, CA: Sage.

Rentfrow, P. J., Gosling, S. D., Jokela, M., Stillwell, D. J., Kosinski, M., & Potter, J. (2013). Divided we stand: Three psychological regions of the United States and their political, economic, social, and health correlates. *Journal of Personality and Social Psychology*, *105*, 996–1012. https://doi.org/10.1037/a0034434

Rentfrow, P. J., Gosling, S. D., & Potter, J. (2008). A theory of the emergence, persistence, and expression of geographic variation in psychological characteristics. *Perspectives on Psychological Science*, *3*, 339–369. https://doi.org/10.1111/j.1745-6924.2008.00084.x

Roberts, B. W., Lejuez, C., Krueger, R. F., Richards, J. M., & Hill, P. L. (2014). What is conscientiousness and how can it be assessed? *Developmental Psychology*, *50*, 1315–1330. https://doi.org/10.1037/a0031109

Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on preemployment personality testing and hiring decisions. *Journal of Applied Psychology*, *83*, 634–644. https://doi.org/10.1037/0021-9010.83.4.634

Roulin, N., & Bourdage, J. S. (2017). Once an impression manager, always an impression manager? Antecedents of honest and deceptive impression management use and variability across multiple job interviews. *Frontiers in Psychology*, *8*, 1–13. https://doi.org/10.3389/fpsyg.2017.00029

Roulin, N., & Krings, F. (2016). When winning is everything: The relationship between competitive worldviews and job applicant faking. *Applied Psychology: An International Review*, *65*, 643–670. https://doi.org/10.1111/apps.12072

Roulin, N., Krings, F., & Binggeli, S. (2016). A dynamic model of applicant faking. *Organizational Psychology Review*, *6*, 145–170. https://doi.org/10.1177/2041386615580875

Ruhs, M., & Anderson, B. (2010). *Who needs migrant workers? Labour shortages, immigration, and public policy*. New York, NY: Oxford University Press.

Sandal, G. M., van de Vijver, F., Bye, H. H., Sam, D. L., Amponsah, B., Cakar, N., … Tien-Lun Sun, C. (2014). Intended self-presentation tactics in job interviews: A 10-country study. *Journal of Cross-Cultural Psychology*, *45*, 939–958. https://doi.org/10.1177/0022022114532353

Shariff, A. F., & Norenzayan, A. (2011). Mean gods make good people: Different views of god predict cheating behavior. *The International Journal for the Psychology of Religion*, *21*, 85–96. https://doi.org/10.1080/10508619.2011.556990

Sharpe Wessling, K., Huber, J., & Netzer, O. (2017). MTurk character misrepresentation: Assessment and solutions. *Journal of Consumer Research*, *44*, 211–230. https://doi.org/10.1093/jcr/ucx053

Simpson, E. H. (1951). The interpretation of interaction in contingency tables. *Journal of the Royal Statistical Society. Series B (Methodological)*, 238–241.

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, *75*, 417–453. https://doi.org/10.3102/00346543075003417

Snell, A. F., Sydell, E. J., & Lueke, S. B. (1999). Towards a theory of applicant faking: Integrating studies of deception. *Human Resource Management Review*, *9*, 219–242. https://doi.org/10.1016/S1053-4822(99)00019-4

Snijders, T., & Bosker, R. (1999). *Multilevel analysis: An introduction to basic and applied multilevel analysis*. London, United Kingdom: Sage.

Stacey, W., & Shupe, A. (1982). Correlates of support for the electronic church. *Journal for the Scientific Study of Religion*, *21*, 291–303. https://doi.org/10.2307/1385519

Steele, F. (2008). *Module 5: Introduction to multilevel modelling concepts*. Retrieved from http://www.cmm.bris.ac.uk/lemma/

Stegmueller, D. (2013). How many countries for multilevel modeling? A comparison of frequentist and bayesian approaches. *American Journal of Political Science*, *57*, 748–761. https://doi.org/10.1111/ajps.12001

Tett, R. P., Anderson, M. G., Ho, C., Yang, T. S., Huang, L., & Hanvongse, A. (2006). Seven nested questions about faking on personality tests: An overview and interactionist model of item-level response distortion. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 43–83). Charlotte, NC: IAP.

Tett, R. P., Freund, K. A., Christiansen, N. D., Fox, K. E., & Coaster, J. (2012). Faking on self-report emotional intelligence and personality tests: Effects of faking opportunity, cognitive ability, and job type. *Personality and Individual Differences*, *52*, 195–201. https://doi.org/10.1016/j.paid.2011.10.017

Tett, R. P., & Simonet, D. V. (2011). Faking in personality assessment: A "multisaturation" perspective on faking as performance. *Human Performance*, *24*, 302–321. https://doi.org/10.1080/08959285.2011.597472

Thackray, M., Tryba, B., & Griffith, R. (2013, April). *Don't mind stealing bread if I'm hungry: Recession and faking*. Presented at the 28th Annual Conference of the Society for Industrial and Organizational Psychology, Houston, TX.

Tonts, M. (2010). Labour market dynamics in resource dependent regions: An examination of the western Australian goldfields. *Geographical Research*, *48*, 148–165. https://doi.org/10.1111/j.1745-5871.2009.00624.x

United States Department of Justice, Federal Bureau of Investigation. (2017, February 20). Crime in the United States. Retrieved August 25, 2017, from FBI - Uniform Crime Reporting website: https://ucr.fbi.gov/ucr

U.S. Bureau of Labor Statistics. (2017, February 20). U.S. Bureau of Labor Statistics. Retrieved August 25, 2017, from https://www.bls.gov/

U.S. Census Bureau. (2017, February 20). Census.gov. Retrieved August 25, 2017, from Census.gov website: https://www.census.gov/en.html

Weiss, B., & Feldman, R. S. (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. https://doi.org/10.1111/j.0021-9029.2006.00055.x

Zey-Ferrell, M., Weaver, K. M., & Ferrell, O. (1979). Predicting unethical behavior among marketing practitioners. *Human Relations*, *32*, 557–569. https://doi.org/10.1177/001872677903200702

CHAPTER V

IS IT ENOUGH TO BE WILLING TO WIN OR DO YOU HAVE TO BE SMART? THE RELATIONSHIP BETWEEN COMPETITIVE WORLDVIEWS, COGNITIVE ABILITIES, AND APPLICANT FAKING IN PERSONALITY TESTS

Abstract

Recent research has highlighted competitive worldviews as a key predictor of faking – the intentional distortion of answers by candidates in the selection context. According to several theoretical assumptions, applicants' abilities, and especially their cognitive abilities, should influence whether the faking motivation, triggered by competitive worldviews, can be turned into successful faking behavior. Therefore, we examined the influence of competitive worldviews on faking in personality tests and investigated a possible moderation of this relationship by cognitive abilities in three independent samples (N_1 = 133, N_2 = 137, N_3 = 268). Our data showed neither an influence of the two variables nor an influence of their interaction on faking behavior. We discuss possible reasons for these findings and give suggestions for further research.

Introduction

In the context of personnel selection, many companies are concerned that applicants distort their answers in self-assessment tools in order to increase their chances of getting hired (Christiansen, Rozek, & Burns, 2010; Hogan, Hogan, & Roberts, 1996). This behavior – known as faking – is quite common in personality tests (e.g., Griffith, Chmielowski, & Yoshita, 2007; Tett, Freund, Christiansen, Fox, & Coaster, 2012) and job interviews (e.g., Levashina & Campion, 2007; Weiss & Feldman, 2006). Previous research has shown that there are also substantial individual differences between applicants in terms of actual faking behavior (e.g., König, Hafsteinsson, Jansen, & Stadelmann, 2011; Raymark & Tafero, 2009): Some applicants fake more than others. These differences can lead to changes in the rank order of applicants and may therefore negatively affect selection decisions (Christiansen, Goffin, Johnston, & Rothstein, 1994; Donovan, Dwight, & Schneider, 2014; Rosse, Stecher, Miller, & Levin, 1998).

Due to the problematic consequences of faking, research has repeatedly focused on this phenomenon, and the corresponding predictors, over several decades. Among the most recent models stemming from this research field is the *dynamic model of applicant faking* (Roulin, Krings, & Binggeli, 2016), which highlights the effects of candidates' perceptions and attitudes towards competition on their faking behavior. In addition to the predictors of faking already known from previous theories, one of the central assumptions of this model is that applicants' competitive worldviews influence their motivation to draw an improved picture of themselves. In line with this idea, first empirical studies have shown substantial correlations between competitive worldviews and faking intentions, as well as resulting faking behavior, in the context of job interviews (Bourdage, Roulin, & Tarraf, 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016).

However, Roulin, Krings and Binggeli's (2016) line of argument is not limited to the interview context and should also be applicable to other selection tools. It is therefore important to test the generalizability of the model and to replicate the findings for other personnel

selection procedures, such as self-assessment tools. Personality tests are particularly suitable for such an evaluation, as they have long been a focus of faking research (e.g., Bass, 1957). Moreover, meta-analytic research has presented some very well-established findings on personality tests (e.g., Birkeland, Manson, Kisamore, Brannick, & Smith, 2006; Hooper, 2007; Viswesvaran & Ones, 1999).

Another aspect from the dynamic model of applicant faking, which has not yet been tested, is the interaction between the motivational component of faking – associated with competitive worldviews – and the capacity required for successful faking. In line with other faking theories (e.g., McFarland & Ryan, 2006; Snell, Sydell, & Lueke, 1999), Roulin et al. (2016) assumed that motivation alone is not sufficient for successful faking. They argued that only if applicants also have the abilities needed to distort their answers in the desired direction can motivation turn into actual faking.

Accordingly, the present study aimed to test the influence of cognitive abilities on the relationship between competitive worldviews and actual faking behavior in the domain of personality tests. As such, this is one of the first studies to examine the direct interplay between motivational and ability aspects of faking. Moreover, the study extends previous research by investigating the effect of competitive worldviews on faking for the first time in the context of personality tests, thereby also addressing the question of the generalizability of previous research findings from job interviews. Using a within-subjects faking design (for an overview of different operationalizations of faking, see: Burns & Christiansen, 2011), we analyzed the corresponding relationships in three independent samples, using three different cognitive ability tests and two different operationalizations of the competitive worldviews construct. In the following sections, we develop our hypotheses regarding this particular type of motivation/ability relationship in the faking context.

Theoretical Background

Competitive Worldviews as a Predictor of Faking Motivation and Behavior

Originally conceptualized in the field of political psychology (Duckitt, 2001), competitive worldviews describe people's stable beliefs that the world is a competitive jungle, in which everyone is in a constant race for scarce resources (Duckitt, Wagner, du Plessis, & Birum, 2002). To succeed in such an environment, people with strong competitive worldviews are more prone to act ruthlessly at times and to do whatever it takes to get ahead. In this respect, competitive worldviews should be most relevant for behavior in situations characterized by competition for resources. Roulin et al. (2016) introduced competitive worldviews for the first time in faking research in their dynamic model of applicant faking, arguing that competition with others for a resource – in this specific case for a job – is particularly salient in selection situations. Their model suggests that people with strong competitive worldviews are more aware of the competition in the selection process, assume that the other candidates are doing everything possible to be selected, and are therefore more motivated to do whatever it takes to get the job, including faking in interviews or self-assessment tools.

In line with this argument, recent empirical studies showed a substantial relationship between applicants' competitive worldviews and faking: Applicants with stronger competitive worldviews showed a higher motivation and intention to fake in a future job interview (Roulin & Krings, 2016: $r = .50$) and also more self-reported faking behavior in past job interviews (Bourdage et al., 2018: $r = .17 – .20$; Roulin & Bourdage, 2017: $r = .22 – .45$; Roulin & Krings, 2016: $r = .46$). Following these empirical results, we expect similar effects for the domain of personality tests. Therefore, we assume a positive relationship between competitive worldviews and faking; people with stronger competitive worldviews should show more faking in personality tests (H_1).

The Effect of Cognitive Abilities on (Successful) Faking Behavior

In accordance with previous faking theories (e.g., Marcus, 2009; Tett & Simonet, 2011), Roulin et al. (2016) assumed that successful faking requires not only the motivation to present oneself in an overly favorable way, but also the capacity to behave and answer accordingly. Applicants need to analyze which characteristics are particularly important to a hiring organization – a task for which an applicant's ability to identify the (selection) criteria (ATIC: König, Melchers, Kleinmann, Richter, & Klehe, 2007) is a key factor. Research on ATIC has shown a direct effect on faking in various selection contexts (Klehe et al., 2012; König et al., 2007) and has also identified applicants' cognitive abilities as a direct antecedent of this ability (Kleinmann et al., 2011). Indeed, applicants must anticipate which answers and behavior an organization expects from qualified applicants and subsequently be able to demonstrate such behavior. According to Roulin et al. (2016), interpersonal skills play an important role for this task. Applicants with more pronounced interpersonal skills should be better at interpreting situational cues in a selection situation and apply appropriate faking tactics based on these cues. Moreover, meta-analytic findings indicated that interpersonal skills are also substantially related to cognitive abilities (Van Rooy & Viswesvaran, 2004), and many authors do not consider them to be independent from cognitive abilities even on a theoretical level (Mayer, Caruso, & Salovey, 1999).

Looking at faking in personality tests in particular, the analytical aspect is probably the most important (Marcus, 2009), because responses to items do not have to be translated into situation-specific and complex interactional behavior, as would be the case in job interviews (Levashina & Campion, 2006). The main challenge for an applicant filling out personality items is to determine whether a particular response captures a characteristic that a company would, to some extent, like to see in an applicant for that job. This primarily analytical task should be easier for applicants with higher cognitive abilities (Marcus, 2009). This assumption is also supported by several empirical studies (e.g., Nguyen, Biderman, & McDaniel, 2005; Pauls &

Crost, 2005; Underhill, Bearden, & Chen, 2008) and meta-analyses (Schilling, Becker, Grabenhorst, & König, 2016), which suggest more faking behavior among more intelligent applicants.

However, the dynamic model of applicant faking (Roulin et al., 2016) expects that the abilities listed above only come into play when applicants are motivated to fake. This suggests that the ability aspect of faking moderates the relationship between an applicant's faking motivation and the actual faking behavior, an assumption that is also found in many previous faking theories (e.g., Ellingson & McFarland, 2011; Goffin & Boyd, 2009; McFarland & Ryan, 2006). Therefore, considering competitive worldviews as a proxy for applicants' motivation to distort responses to their benefit, and cognitive abilities as a proxy for the ability to translate this motivation into successful faking, leads us to the hypothesis that cognitive abilities should moderate the relationship between competitive worldviews and faking. Specifically, we expected a stronger relation between competitive worldviews and faking behavior with increasing cognitive abilities (H_2).

Overview of Samples

We tested our hypotheses on competitive worldviews and cognitive abilities in three separate samples to validate the generalizability of our findings. In all three samples, we used a within-subject faking design, in which the participants completed a personality test once under an honesty condition and once under an applicant condition, a paradigm frequently used in previous research (Burns & Christiansen, 2011). When selecting the samples, we focused on people who are at a point in their school or university education where applications are imminent. This entails two major advantages. First, such participants are rather young and should have little experience with the application process; therefore, prior experience should have less or no influence on the examined effects. Second, the task of applying for a job and participating in a selection process should be relatively salient to all participants, because they

are in a period of their lives in which they have to apply for internships or jobs in the near future. To demonstrate the robustness of our results, we (a) used three different established methods to measure cognitive abilities and (b) measured competitive worldviews using two methods: once with the method established in the literature (Duckitt et al., 2002; Roulin & Krings, 2016) and once with a newly developed questionnaire.

Using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009), we calculated $N = 109$ as the minimum sample size required, based on a main effect of $r = .30$ (the median effect size of the corresponding studies from the area of job interviews, Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016) and for a power of $1 - \beta = .90$.

Sample 1

In our first sample, we looked at faking behavior in a personality test among psychology students who had to apply for an internship during their second or third year of studies. The corresponding data collection took place at a German university in the course of the first semester of the Bachelor's degree. Currently, personality tests are regularly used as part of the process to fill internships; for instance Goldman Sachs has recently started to use personality tests for this purpose (Oran, 2017).

Methods

Sample and procedure. Data were collected at three time points during a first-semester lecture in psychology at a German university. At the first testing session, cognitive abilities were measured. At the second testing session (four weeks later), we assessed competitive worldviews and personality under standard (honest) instructions. In the third test session (one week after the second session), participants completed the personality test again, this time with instructions to do so as if they were applying for their mandatory internship. Therefore, they should imagine that they were in the process of applying for a very prestigious internship position and picture this situation as concretely as possible. Moreover, to further increase their

involvement, participants were instructed to note down details of this situation (e.g., the challenges they expect to face during this internship). The participants were then presented with a letter from the fictitious company offering this internship. In the letter, the participants were thanked for their application and informed about the following selection process including various selection tests. All of these efforts were undertaken to maximize participants' engagement and to create a situation as close as possible to a real application situation. In total, data were collected from 133 persons who took part in all three testing sessions. The mean age was 21.24 years (*SD* = 3.29) and 81.95% were women.

Measures. ***Competitive worldviews.*** To measure competitive worldviews, we used the 20-item *Competitive Jungle Social World View scale* (Duckitt et al., 2002). Sample items are "It's a dog-eat-dog world where you have to be ruthless at times" or "Winning is not the first thing; it's the only thing." Items are rated on 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. This scale has also been used in previous research on competitive worldviews in the context of faking and showed adequate reliability (Cronbach's $\alpha = .92$; Roulin & Krings, 2016). All 20 items were translated from English into German by two independent translators. Based on the procedure of Douglas and Craig (2007), a collaborative translation approach was established after the independent translation. All items were translated as literally as possible. Fixed English idioms were replaced by German equivalents; for example, the aforementioned "dog-eat-dog" item was translated to: "Wir leben in einer Welt des 'Fressen-oder-gefressen-Werdens', in der man manchmal rücksichtslos sein muss."

To check the validity of the translated scale, we assessed further variables that are linked to competitive worldviews according to Duckitt's Dual Process Model (2001). In line with Duckitt's research, competitive worldviews should be positively related to social dominance orientation, which captures a person's preference for hierarchical relationships between groups. In this realm, previous research has shown that people with stronger competitive worldviews also prefer the maintenance of hierarchical social systems (i.e., show a higher social dominance

orientation). In addition, competitive worldviews should be negatively related to Honesty-Humility, a factor of the HEXACO model of personality (Lee & Ashton, 2004), which measures a person's honesty, fairness, greed avoidance, and modesty. These aspects stand in direct logical conflict to the behavior of people with strong competitive worldviews, who seek their own advantage without regard for others.

Our data showed a significant positive relationship between participants' ($N = 133$) scores on the translated competitive worldviews scale and their scores on the German version of the 16-item *Social Dominance Orientation Scale* (Pratto, Sidanius, Stallworth, & Malle, 1994; Six, Wolfrath, & Zick, 2001), $r = .40$, $p < .01$. Participants' scores on the Honesty-Humility factor of the HEXACO-60 (Ashton & Lee, 2009) model of personality were significantly negatively related to their scores on the translated competitive worldviews scale, $r = -.60$, $p < .01$. Both of these correlations, as well as the good reliability of the scale (Cronbach's $\alpha = .84$), indicate that our German version of the Competitive Jungle Social World View scale provides an adequate measurement of competitive worldviews.

Cognitive abilities. We used the short version of the Leistungsprüfsystem 2 (LPS-2K) (Kreuzpointner, 2013; Kreuzpointner, Lukesch, & Horn, 2013), which is based on John Carroll's intelligence theory (Carroll, 1997). This test measures a participant's cognitive abilities, with the overall score covering the aspects of crystallized intelligence, fluid intelligence, visual perception as well as cognitive speed. The LPS-2K demonstrated positive psychometric characteristics in previous research (Kreuzpointner et al., 2013) and takes 30 minutes to complete.

Faking. We used regression-adjusted difference scores to operationalize faking. In this approach (Burns & Christiansen, 2011), the unstandardized residuals, left over from the prediction of the applicant personality scores by the honest personality scores, are used as indicators of faking behavior in personality tests. Applicants' faking scores, resulting from this

procedure, are independent of their underlying personality scores and possess better psychometric characteristics than simple difference scores (Burns & Christiansen, 2011).

As a personality test, we used the Big Five Inventory (BFI, see e.g., John, Naumann, & Soto, 2008) in the German version by Fell and König (2016) with 44 items. The BFI is an easy-to-use and robust test that measures the Big Five personality traits (Neuroticism, Extraversion, Agreeableness, Openness to Experience, and Conscientiousness; Lang, Lüdtke, & Asendorpf, 2001). Sample items are "I see myself as someone who makes plans and follows through with them" (conscientiousness) and "I see myself as someone who likes to reflect, play with ideas" (openness to experience). Items are rated on a 5-point scale from 1 = *Disagree strongly* to 5 = *Agree strongly*. For simplification and better interpretation, *Neuroticism* was reverse-coded as *Emotional Stability.*

Results

Table V.1 presents the descriptive statistics and correlations for Sample 1. In line with the assumptions of our within-subject faking paradigm, participants scored significantly higher in the applicant condition than in the honest condition for all five personality traits, $t(132) = 3.10 – 10.84$, $p < .01$, $d = .27 – .94$. The variances of the personality scores remained basically the same for both conditions, $F(132, 132) = 1.02 – 1.16$, $p > .39$. The faking effect sizes were in the range expected from meta-analytical results (Birkeland et al., 2006: $d_{ALL} = .11 – .44$; Hooper, 2007: $d_{ALL} = .23 – 1.07$; Viswesvaran & Ones, 1999: $d_{ALL} = .47 – .93$).[6] The mean level of competitive worldviews found in this sample ($M = 1.96$, $SD = .44$) corresponded to previous studies in the faking context (Bourdage et al., 2018: $M = 2.21$, $SD = .51$; Roulin & Bourdage, 2017: $M = 2.15$, $SD = .54$; Roulin & Krings, 2016: $M = 2.24 – 2.39$, $SD = .52 – .58$). The mean LPS-2K score ($M = 95.62$, $SD = 16.21$) was slightly above that reported by the test authors (Kreuzpointner, 2013: $M = 80.19$, SD only

[6] The Big Five dimensions of the corresponding results are indicated by their abbreviations. All Big Five Dimensions = ALL; Conscientiousness = C; Emotional Stability = ES; Agreeableness = A; Extraversion = E; Openness to Experience = O.

reported on a subtest level) but was fairly similar to scores from other samples of psychology students (Schwabe, 2018: $M = 102.64$, $SD = 21.07$). As indicated by previous research (Sibley & Duckitt, 2009), we found high correlations between participants' agreeableness and their competitive worldviews under the honest condition – and also under the applicant condition. In addition, the correlations between the personality scores under the two conditions were rather high ($r = .78 – .89$). In the course of calculating the regression-adjusted difference scores, the participants' honest personality scores explained 61.3% – 78.3% of the variance in their applicant personality scores.

Table V.2 summarizes the results concerning our two hypotheses, tested separately for all five personality traits. The results did not show a significant main effect of competitive worldviews ($p_{all\ traits} > .20$), or of cognitive abilities ($p_{all\ traits} > .08$). Moreover, the interaction of the two predictors did not significantly affect candidates' faking in the personality test for any of the personality traits ($p_{all\ traits} > .27$). Therefore, both Hypothesis 1 and Hypothesis 2 had to be rejected for Sample 1. In total, competitive worldviews, cognitive abilities and the corresponding interaction explained only a very small proportion of the variance in the regression-adjusted difference scores ($R^2 = .003 – .039$). To further confirm the results, we (a) checked the influence of the control variables age and gender and (b) recalculated the models based on simple difference scores as used in some previous studies (e.g., McFarland & Ryan, 2000; Peterson, Griffith, Isaacson, O'Connell, & Mangos, 2011). Neither had any influence on the results regarding the hypotheses of this study (results available upon request from the first author).

Table V.1

Means, Standard Deviations, and Correlations Among Main Variables Sample 1

Variable	*M (SD)*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. CWs	1.96 (0.44)	(.84)															
2. Cognitive abilities	95.62 (16.21)	-.09	(.94)														
3. Conscientiousness$_H$	3.63 (0.61)	-.20*	-.04	(.83)													
4. Emotional Stability$_H$	3.01 (0.64)	-.26**	-.13	.21*	(.81)												
5. Agreeableness$_H$	3.72 (0.52)	-.57**	-.02	.37**	.29**	(.72)											
6. Extraversion$_H$	3.47 (0.65)	-.14	.02	.14	.30**	.20*	(.86)										
7. Openness to Exp.$_H$	3.66 (0.59)	-.25**	-.00	.02	.14	.18*	.13	(.82)									
8. Conscientiousness$_A$	3.97 (0.57)	-.22*	-.02	.78**	.23**	.39**	.07	-.03	(.85)								
9. Emotional Stability$_A$	3.38 (0.64)	-.16	-.09	.11	.81**	.23**	.23**	.08	.35**	(.85)							
10. Agreeableness$_A$	3.89 (0.50)	-.49**	-.01	.26**	.29**	.82**	.14	.12	.45**	.40**	(.75)						
11. Extraversion$_A$	3.66 (0.61)	-.14	-.05	.07	.26**	.21*	.89**	.10	.15	.35**	.27**	(.87)					
12. Openness to Exp.$_A$	3.74 (0.58)	-.18*	-.04	-.03	.14	.14	.10	.87**	.03	.22*	.20*	.21*	(.84)				
13. Conscientiousness$_R$	0.00 (0.35)	-.10	.01	.00	.10	.16	-.06	-.08	.62**	.43**	.40**	.14	.08	-			
14. Emotional Stability$_R$	0.00 (0.38)	.07	.03	-.09	.00	-.01	-.02	-.06	.29**	.59**	.27**	.23**	.18*	.59**	-		
15. Agreeableness$_R$	0.00 (0.29)	-.03	.01	-.07	.09	.00	-.03	-.05	.23**	.36**	.57**	.17*	.15	.46**	.49**	-	
16. Extraversion$_R$	0.00 (0.28)	-.03	-.17	-.12	-.01	.08	.00	-.03	.18*	.32**	.32**	.45**	.26**	.44**	.54**	.45**	-
17. Openness to Exp.$_R$	0.00 (0.29)	.06	-.08	-.09	.05	-.04	-.02	.00	.12	.31**	.19*	.24**	.49**	.31**	.46**	.38**	.58**

Note. The numbers in the diagonal represent Cronbach's alpha of the scales. CWs = competitive worldviews (measured with 20-item scale). Cognitive abilities were measured with the Leistungsprüfsystem-2 Kurzversion (LPS-2K). The subscript after the variable name indicates the source; $_H$ = honest condition, $_A$ = applicant condition, $_R$ = faking measured as regression-adjusted difference scores. Openness to Exp. = Openness to Experience. Paired-sample t-tests showed significant effects for all five personality traits; Conscientiousness $t(132) = 10.24$; $p < .01$; $d = .89$, Emotional Stability $t(132) = 10.84$; $p < .01$; $d = .94$, Agreeableness $t(132) = 6.42$; $p < .01$; $d = .56$, Extraversion $t(132) = 7.56$; $p < .01$; $d = .66$, Openness to Experience $t(132) = 3.10$; $p < .01$; $d = .27$. Correlations are based on $N = 133$. $^{*}p < .05$, $^{**}p < .01$.

Table V.2

Regression Models for Faking on the Five Personality Traits in Sample 1

	Δ Conscientiousness		Δ Emotional Stability		Δ Agreeableness		Δ Extraversion		Δ Openness to Exp.	
Predictors	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*
(Intercept)	0.00 (-0.06 – 0.06)	0.91	0.00 (-0.07 – 0.06)	0.91	0.00 (-0.05 – 0.05)	0.96	0.00 (-0.04 – 0.05)	0.92	0.00 (-0.05 – 0.05)	0.97
CWs	-0.09 (-0.23 – 0.05)	0.20	0.05 (-0.10 – 0.20)	0.49	-0.03 (-0.14 – 0.09)	0.66	-0.02 (-0.13 – 0.09)	0.68	0.04 (-0.07 – 0.16)	0.48
Cogn. abil.	-0.00 (-0.00 – 0.00)	0.78	0.00 (-0.00 – 0.00)	0.91	0.00 (-0.00 – 0.00)	0.99	-0.00 (-0.01 – 0.00)	0.08	-0.00 (-0.00 – 0.00)	0.47
IA	-0.01 (-0.01 – 0.00)	0.27	-0.01 (-0.01 – 0.00)	0.27	-0.00 (-0.01 – 0.01)	0.66	0.00 (-0.00 – 0.01)	0.31	0.00 (-0.01 – 0.01)	0.72
R^2	0.019		0.016		0.003		0.039		0.010	

Note. Δ = Faking for the corresponding personality trait, measured as regression-adjusted difference score. Openness to Exp. = Openness to Experience; CWs = competitive worldviews; Cogn. abil. = cognitive abilities (measured with the Leistungsprüfsystem-2 Kurzversion LPS-2K). IA = Interaction between competitive worldviews and cognitive abilities. All predictors were centered to enhance interpretability of the results. Confidence intervals (95%) are given in brackets below the corresponding *b*'s (the unstandardized regression weights). $N = 133$.

Discussion

Contrary to our assumptions based on previous research (Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016), we found neither an effect of competitive worldviews on faking behavior nor a moderation of this relationship by the participants' cognitive abilities. Nevertheless, all other key parameters (e.g., the effect sizes for faking) indicated that our study design worked as expected.

Another noteworthy fact is that the correlations between participants' personality scores under the honest and the applicant condition were in the range that could be expected from previous research with similar study designs, but rather in upper part of the distribution (e.g., compared to Biderman & Nguyen, 2009: r_{ALL} = .69 – .85; Christiansen, Burns, & Montgomery, 2005: $r_{C,E}$ = .18 – .34; Griffith et al., 2007: r_C = .50; Peterson et al., 2011: r_C = .62) and reached or even exceeded ranges assumed as test-retest reliability (Gnambs, 2014: ρ_{ALL} = .80 – .83; Viswesvaran & Ones, 2000: ρ_{ALL} = .73 – .78). Despite this, we found a significant mean shift between the honest and applicant condition for all five personality traits: In combination with the statistical argument[7] that the interpersonal variance in faking is automatically negatively related to the correlation between the two conditions, it follows that most participants seem to have distorted their responses in a similar way. This partially contradicts the results of previous research, which gave clear evidence of strong interindividual differences in faking behavior and of a negative effect of faking on the consistency of personality measurement (e.g., Raymark & Tafero, 2009; Salgado, 2016).

[7] The individual faking of participants (individual differences in personality scores between honest and applicant condition) varies in relation to the mean faking effect (mean difference between the two conditions). The higher the correlation between the personality scores from both conditions, the lower the variance of the individual faking.

It applies: $Var_{(f)} = Var_{(h)} + Var_{(a)} - 2Cov_{(h,a)}$ and $r_{(h,a)} = \frac{Cov_{(h,a)}}{\sqrt{Var_{(h)}}\sqrt{Var_{(a)}}}$

$\Longrightarrow Var_{(f)} = Var_{(h)} + Var_{(a)} - 2\, r_{(h,a)}\sqrt{Var_{(h)}}\sqrt{Var_{(a)}}$

Given: $Var_{(h)} = Var_{(a)}$

$\Longrightarrow Var_{(f)} = 2Var_{(h)}\left(1 - r_{(h,a)}\right)$

$Var_{(f)}$ = variance in individual faking, $Var_{(h)}$= variance in honest scores, $Var_{(a)}$ = variance in applicant scores $Cov_{(h,a)}$ = covariance between honest and applicant scores, $r_{(h,a)}$ = correlation between honest and applicant scores.

An explanation for our findings may be that participants in this particular sample already possessed some knowledge about the psychological concept of personality even though they were only at the beginning of their psychology studies. This might have led participants to behave similarly, as they also had a shared idea of how to respond successfully to a personality test in a selection situation based on this knowledge. To rule out such an explanation, we decided to replicate our experiment with a second academic sample without such knowledge.

Sample 2

In our second sample, we looked at faking behavior in a personality test among German university students of a teacher training program. In Germany, teacher training studies at a university last for at least 4.5 years and are followed by a practical part of teacher training, which usually lasts between 18 and 24 months ("Lehramtsreferendariat" in German). In German-speaking countries, there is a growing call to replace the current selection practice for teaching positions, which is often solely based on grades, with a system that places a stronger focus on appropriate individual characteristics for the teaching profession. Accordingly, some universities (e.g. the University of Passau: Wirth & Seibert, 2011) are in the process of establishing broader selection procedures, which also encompass personality tests, including a test specifically developed for this purpose, the "Teacher Student Assessment Austria (TESAT)" (Neubauer et al., 2017). It is therefore plausible that students in teacher training, like those in this sample, will also encounter personality tests in the future when applying for the practical part of their teacher training.

Methods

Sample and procedure. Data were collected at two time points during a lecture of a teacher training course at a German university. At the first testing session, we measured cognitive abilities, and at the second testing session (four weeks later), we measured competitive worldviews and the participants completed a similar within-person faking

paradigm as in Sample 1. The scenario was adapted to the study course and therefore focused on an application for the practical part of teacher training rather than an application for an internship. In total, data were collected from 137 persons who took part in both testing sessions. The mean age was 23.16 (*SD* = 5.21), and 78.10% were women.

Measures. ***Competitive worldviews.*** The same German-language 20-item Competitive Jungle Social World View scale was used as in Study 1.

Cognitive abilities. To measure participants' cognitive abilities, we used the Intelligenz-Struktur-Test-Screening (IST-Screening: Liepmann, Beauducel, Brocke, & Nettelnstroth, 2012), a short version of the well-established Intelligence-Structure-Test 2000 R (I-S-T 2000 R; Liepmann, Beauducel, Brocke, & Wim Nettelnstroth, 2007). The IST-Screening is based on Thurstone's and Cattell's intelligence theories and measures verbal, numerical, and figural reasoning abilities with 20 items each (Liepmann et al., 2012). The overall score on the three ability facets indicates the general reasoning ability, which is a good proxy for people's cognitive abilities (Guttman & Levy, 1991). The test authors have reported good convergent and discriminant validity coefficients as well as adequate internal consistencies (α = .87 – .90; Liepmann et al., 2012).

Faking. We used the same approach and personality test (Big Five Inventory: Fell & König, 2016) as in Sample 1 to measure faking. Due to organizational constraints, both conditions of the personality test had to be completed in one test session. Therefore, we varied the order of the conditions randomly between the participants in order to exclude any confounding effects. Faking scores were calculated as regression-adjusted difference scores between the two conditions of the personality test.

Results

Table V.3 presents the descriptive statistics and correlations for Sample 2. In line with the intended experimental manipulation, participants showed significantly higher personality scores in the applicant condition than in the honest condition, $t(136) = 6.07 – 9.32$; $p < .01$;

d =.37 – .80. The variances of the personality scores remained basically the same for both conditions, $F(136, 136) = 1.08 – 1.28$; $p > .15$. Corresponding effect sizes were again in the range of previous research results (e.g., Birkeland et al., 2006; Hooper, 2007; Viswesvaran & Ones, 1999; see results section of Sample 1). The competitive worldviews scores ($M = 1.90$, $SD = .39$) were also comparable to previous studies (e.g., Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016; see results section of Sample 1) and the mean IST-Screening score matched the standard values of the test manual for this age and educational group (M = 46.59 [21 – 25 years, with university entrance-level qualifications]; Liepmann et al., 2012). In accordance with previous research (Sibley & Duckitt, 2009), we found a high negative correlation between participants' agreeableness and their competitive worldviews, under both the honest and the applicant condition ($r_H = -.52$, $r_A = -.48$). In this sample, the correlations between the personality scores under the two conditions were rather high ($r = .79 – .91$); correspondingly, the honest personality scores of the participants explained 61.8% – 80.5% of the variance in their applicant scores.

Table V.4 summarizes the results regarding our two hypotheses, tested separately for all five personality traits. The results did not show a significant main effect of competitive worldviews ($p_{all\ traits} > .20$), or of cognitive abilities ($p_{all\ traits} > .18$). Moreover, the interaction of the two predictors did not significantly affect candidates' faking in the personality test for any of the personality traits ($p_{all\ traits} > .12$). Therefore, both Hypothesis 1 and Hypothesis 2 were rejected for Sample 2. Overall, competitive worldviews, cognitive abilities and the corresponding interaction explained only a very small proportion of the variance in the regression-adjusted difference scores ($R^2 = .011 – .028$). These results were also robust when faking scores were calculated based on simple difference scores or when results were controlled for further influencing variables (age, gender).

Table V.3

Means, Standard Deviations, and Correlations Among Main Variables Sample 2

Variable	*M (SD)*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. CWs	1.90 (0.39)	(.81)															
2. Cognitive abilities	46.73 (4.82)	-.03	(.80)														
3. Conscientiousness$_H$	3.85 (0.58)	-.22**	-.08	(.81)													
4. Emotional Stability$_H$	3.28 (0.70)	-.11	-.06	.31**	(.85)												
5. Agreeableness$_H$	3.97 (0.51)	-.52**	.05	.46**	.30**	(.76)											
6. Extraversion$_H$	3.68 (0.69)	-.11	-.09	.29**	.39**	.17*	(.87)										
7. Openness to Exp.$_H$	3.68 (0.62)	-.09	.01	.12	.26**	.21*	.24**	(.84)									
8. Conscientiousness$_A$	4.11 (0.56)	-.17*	-.03	.83**	.19*	.36**	.23**	.02	(.83)								
9. Emotional Stability$_A$	3.58 (0.64)	-.11	.00	.30**	.79**	.22**	.36**	.21*	.40**	(.84)							
10. Agreeableness$_A$	4.08 (0.45)	-.48**	.04	.43**	.21*	.79**	.14	.11	.48**	.34**	(.72)						
11. Extraversion$_A$	3.83 (0.64)	-.09	-.04	.25**	.29**	.11	.91**	.15	.33**	.41**	.18**	(.86)					
12. Openness to Exp.$_A$	3.82 (0.57)	-.04	-.01	.13	.25**	.15	.24**	.90**	.12	.30**	.15	.22**	(.82)				
13. Conscientiousness$_R$	0.00 (0.31)	.02	.06	.00	-.12	-.05	-.01	-.14	.55**	.27**	.22**	.22*	.02	-			
14. Emotional Stability$_R$	0.00 (0.39)	-.02	.08	.08	.00	-.02	.09	.01	.40**	.62**	.28**	.29**	.17*	.59**	-		
15. Agreeableness$_R$	0.00 (0.27)	-.11	.01	.10	-.05	.00	.01	-.09	.32**	.27**	.61**	.15	.05	.43**	.50**	-	
16. Extraversion$_R$	0.00 (0.27)	.03	.10	-.03	-.14	-.11	.00	-.17	.27**	.19*	.11	.42**	.01	.54**	.49**	.33**	-
17. Openness to Exp.$_R$	0.00 (0.25)	.09	-.03	.06	.05	-.09	.05	.00	.23**	.26**	.11	.20*	.44**	.33**	.36**	.29**	.35**

Note. The numbers in the diagonal represent Cronbach's alpha of the scales. CWs = competitive worldviews (measured with 20 item scale). Cognitive abilities were measured with the Intelligenz-Struktur-Test-Screening. The subscript after the variable name indicates the source; $_H$ = honest condition, $_A$ = applicant condition, $_R$ = faking measured as regression-adjusted difference scores. Openness to Exp. = Openness to Experience. Paired sample t-tests showed significant effects for all five personality traits; Conscientiousness $t(136) = 9.32$; $p < .01$; $d = .80$, Emotional Stability $t(136) = 8.01$; $p < .01$; $d = .68$, Agreeableness $t(136) = 4.27$; $p < .01$; $d = .37$, Extraversion $t(136) = 6.07$; $p < .01$; $d = .52$, Openness to Experience $t(136) = 6.13$; $p < .01$; $d = .52$. Correlations are based on $N = 137$. *$p < .05$, **$p < .01$.

Table V.4

Regression Models for Faking on the Five Personality Traits in Sample 2

	Δ Conscientiousness		Δ Emotional Stability		Δ Agreeableness		Δ Extraversion		Δ Openness to Exp.	
Predictors	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*
(Intercept)	0.00 (-0.05 – 0.05)	0.98	0.00 (-0.07 – 0.07)	0.98	0.00 (-0.05 – 0.05)	0.99	0.00 (-0.05 – 0.04)	0.97	0.00 (-0.04 – 0.04)	0.97
CWs	0.02 (-0.12 – 0.15)	0.78	-0.02 (-0.19 – 0.15)	0.79	-0.08 (-0.20 – 0.04)	0.20	0.02 (-0.10 – 0.14)	0.75	0.06 (-0.05 – 0.16)	0.31
Cogn. abil.	0.00 (-0.01 – 0.02)	0.38	0.01 (-0.01 – 0.02)	0.34	-0.00 (-0.01 – 0.01)	0.99	0.01 (-0.00 – 0.02)	0.18	-0.00 (-0.01 – 0.01)	0.87
IA	-0.01 (-0.04 – 0.01)	0.34	-0.01 (-0.05 – 0.02)	0.44	0.01 (-0.02 – 0.03)	0.62	-0.02 (-0.05 – 0.01)	0.12	-0.02 (-0.04 – 0.01)	0.16
R^2	0.011		0.011		0.014		0.028		0.023	

Note. Δ = Faking for the corresponding personality trait, measured as regression-adjusted difference score. Openness to Exp. = Openness to Experience; CWs = competitive worldviews; Cogn. abil. = cognitive abilities (measured with the Intelligenz-Struktur-Test-Screening); IA = Interaction between competitive worldviews and cognitive abilities. All predictors were centered to enhance interpretability of the results. Confidence intervals (95%) are given in brackets below the corresponding *b*'s (the unstandardized regression weights). $N = 137$.

Discussion

Similar to the results in Sample 1, we found neither the assumed effect of competitive worldviews on faking behavior nor a moderation of this relationship by the participants' cognitive abilities. Overall, we found exactly the same pattern of results as in Sample 1. Additionally, the correlations between the participants' personality scores under the honest condition and under the applicant condition were comparable to Sample 1. As such, it is therefore unlikely that Sample 1 participants' knowledge about personality as a psychological construct and its assessment was the reason for the lack of effects associated with interindividual variations in faking. Taken together, the results of these two samples raise questions about the generalizability of findings concerning competitive worldviews (Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016) as well as a moderation effect of cognitive abilities (Roulin et al., 2016).

Another possible explanation for the lack of interindividual variance of the faking might lie in the limitation to a sample consisting purely of university students and the associated indirect variance restriction due to admission requirements. To also rule out this alternative explanation, we decided to replicate our experiment with a third, non-academic, sample without such restrictions.

Sample 3

In our third sample, we focused on a relatively diverse group of school pupils shortly before graduation. The participants came from different tracks of secondary school, with graduation after 9, 10, or 12 years (lower track, medium track, higher track, respectively). The data were collected as part of an application training course organized in cooperation with the Ministry of Education of a German Federal state. After graduation, pupils in Germany usually apply for an apprenticeship training position, a university place, or directly for a job in a company. In the course of the corresponding selection procedures, both companies and

universities are increasingly using psychometric selection methods, including personality tests (Diekmann & König, 2015; Schuler, Hell, Trapmann, Schaar, & Boramir, 2007).

Methods

Sample and procedure. Data were collected as part of an application training course, which was offered to pupils in preparation for future selection procedures. One week before the actual training, pupils filled out a questionnaire assessing competitive worldviews, Honesty-Humility and personality under honest instructions. The application training itself was designed to reflect a real selection situation. After a brief introduction, the coaches played the role of human resource employees of a fictitious company. As part of a cover story, the pupils were told to imagine that they had applied for a job with this company and were now taking part in a selection process. During this training session, we measured cognitive abilities and participants completed the personality test again, this time with instructions to do so as if they were applying for the job specified in the cover story. In total, complete data were collected from 268 participants. The mean age was 16.66 years (SD = 1.27), 54.48% were women and the participants were between their 8th and 11th year of school education. The specific training course was conducted at six different secondary schools, with 25.37% of the participants attending a lower-track school, 16.04 % a medium-track school, and 58.59% a higher-track school.

Measures. ***Competitive worldviews.*** For organizational reasons and due to the distinctive nature of this sample, we did not use the Competitive Jungle Social World View scale in Sample 3. In particular, subject matter experts recommended against such a long (20 items with an average of 18 words per item) and linguistically demanding scale in this broad educational context. Therefore, we developed a short scale on competitive worldviews, which should capture the aspects underlying the construct (Darwinistic Attitude, Social Dominance Orientation, Tough Mindedness, Machiavellianism; Duckitt et al., 2002) while being more comprehensible and appropriate for the time constraints in this sample. The main goal was not

to reduce the Competitive Jungle Social World View scale to a manageable size, but rather to develop a new operationalization from scratch that focuses on content validity.

Based on the definition of competitive worldviews (Duckitt et al., 2002), we created a pool with linguistically simple and short items. As in the original scale, all items were formulated according to the principle of indirect questioning (e.g., Fisher, 1993) – this means that they did not refer to the persons themselves but to the population in general – in order to lower socially desirable response tendencies. After an iterative process involving expert feedback and repeated empirical testing, we selected the items with the best psychometric properties.

The resulting 8-item scale was tested in a sample ($N = 76$) consisting mainly of school pupils and university students in their first semesters. In addition to the competitive worldviews short scale, the participants completed the German version of the Social Dominance Orientation Scale (Pratto et al., 1994; Six et al., 2001) and the Honesty-Humility scale from HEXACO-60 (Ashton & Lee, 2009) as well as the German translation of the Competitive Jungle Social World View scale (Duckitt et al., 2002), all of which were used in Sample 1. The competitive worldviews short scale showed a single-factor structure (principal component analysis with parallel analysis; O'Connor, 2000) and good reliability (Cronbach's $\alpha = .82$).

Both scales measuring competitive worldviews showed similar uncorrected correlations with social dominance orientation (original scale $r = .47$, $p < .01$ vs. short scale $r = .42$, $p < .01$) as well as a concurrent relationship to Honesty-Humility (original scale $r = -.50$, $p < .01$ vs. short scale $r = -.26$, $p < .05$). Scores of the original and the short scale correlated considerably ($r = .40$, $p < .01$). In conclusion, the newly developed 8-item competitive worldviews short scale meets the main objective of reducing the required response time (median response time: original scale = 212 seconds in total, short scale = 52 seconds in total) and provides an adequate measurement of competitive worldviews especially in relation to the definition of the construct. Sample items are: "Most people think that their own success is the only thing that really matters

in life" and "Most people are willing to manipulate others to achieve their goals." Items were rated on a 5-point scale from 1 = *Disagree strongly* to 5 = *Agree strongly*. An overview of the final eight German items can be found in Appendix B Table 1.

Cognitive abilities. We used the German version of the Wonderlic Personnel Test (WPT), a short-form cognitive ability test developed to measure a person's cognitive abilities (Wonderlic & Hovland, 1939). The WPT consists of 50 items from the areas of mathematics, reasoning as well as vocabulary and has a strict time limit of 12 minutes (Wonderlic & Hovland, 1939). The WPT has demonstrated good psychometric properties (e.g., Dodrill, 1983) and is one of the most commonly used intelligence tests in both research and personnel selection (e.g., Super, 2006).

Faking. We used the same approach as in Sample 1 and 2 to measure faking. Due to time constraints, we replaced the BFI with the corresponding short form of the Big Five Inventory (BFI-K: Rammstedt & John, 2005). The BFI-K measures the same five personality traits as the BFI with 21 instead of 44 items. Despite the short test length, the BFI-K has demonstrated acceptable reliability (Cronbach's $\alpha = .64 – .86$) and similar validity compared to the longer test version in previous research (Rammstedt & John, 2005).

Results

Table V.5 presents the descriptive statistics and correlations for Sample 3. We found a significant faking effect for all five personality traits, $t(267) = 2.10 – 8.67$; $p < .05$; $d = .13 – .53$. The variances of the personality scores remained basically the same for both conditions, $F(267, 267) = 1.00 – 1.27$; $p > .05$. Corresponding effect sizes were in the lower range of previous research results (Birkeland et al., 2006; Hooper, 2007; Viswesvaran & Ones, 1999). The mean score on the Wonderlic Personnel Test ($M = 23.15$) corresponded to that from other studies in the educational context ($M = 26.7$; McKelvie, 1989). In Sample 3, we also found a significant correlation between participants' agreeableness and their competitive worldviews, although lower than in the other two samples ($r = -.12 – -.31$). In addition,

participants' cognitive abilities, measured with the Wonderlic Personnel Test, were significantly correlated with their competitive worldviews scores ($r = .28$). Overall, the correlations between the personality scores under the two conditions were high ($r = .47 – .63$) and the honest personality scores of the participants explained 24.1% – 43.6% of the variance in their applicant scores.

Table V.6 summarizes the results concerning our two hypotheses, tested separately for all five personality traits. Our results showed no main effect of competitive worldviews on applicants' faking for four of the five personality traits ($p_{4 \text{ of } 5 \text{ trait}} > .40$). The results suggested a significant effect of competitive worldviews ($b = .13$, $p < .05$) on participants' faking behavior for Extraversion. Participants with stronger competitive worldviews seem to show a greater tendency for faking with respect to the personality trait extraversion. However, considering the large number of individual tests carried out so far, this single significant effect only supports the corresponding Hypothesis 1 to an insufficient degree. If the significance level is adjusted for multiple testing (e.g., by Holm–Bonferroni method: Holm, 1979), the effect of competitive worldviews does not reach significance. There were also significant main effects of participants' cognitive abilities on faking of Emotional Stability ($b = .01, p < .05$) and faking of Extraversion ($b = .01, p < .05$), which both disappeared when corrected for multiple testing. The interaction of the two predictors also did not significantly affect candidates' faking in the personality test for any of the personality traits ($p_{all\ traits} > .12$). In conclusion, both Hypothesis 1 and Hypothesis 2 can be considered as rejected for Sample 3. Competitive worldviews, cognitive abilities and the corresponding interaction only explained a very small proportion of the variance in the regression-adjusted difference scores ($R^2 = .002 – .051$). The results from Sample 3 were also robust when faking scores were calculated based on simple difference scores, when results were controlled for further influencing variables (age, gender), and when a potential multi-level structure of schools and classes was taken into account.

Table V.5

Means, Standard Deviations, and Correlations Among Main Variables Sample 3

Variable	*M (SD)*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. CWs	3.34 (0.67)	(.80)															
2. Cognitive abilities	23.15 (6.88)	.28**	(.88)														
3. Conscientiousness$_H$	3.52 (0.71)	-.00	-.00	(.70)													
4. Emotional Stability$_H$	3.12 (0.81)	-.07	.21**	.17**	(.67)												
5. Agreeableness$_H$	3.05 (0.71)	-.31**	-.18**	.14*	-.05	(.55)											
6. Extraversion$_H$	3.29 (0.78)	-.04	.19**	.15*	.31**	.04	(.70)										
7. Openness to Exp.$_H$	3.51 (0.72)	.16**	.05	.25**	-.06	.04	.10	(.57)									
8. Conscientiousness$_A$	3.84 (0.63)	.07	.09	.49**	.04	.05	.14*	.11	(.74)								
9. Emotional Stability$_A$	3.47 (0.74)	-.05	.23**	.04	.63**	-.10	.33**	-.09	.27**	(.71)							
10. Agreeableness$_A$	3.23 (0.70)	-.12*	-.05	.04	-.11	.47**	.05	.08	.16**	.04	(.64)						
11. Extraversion$_A$	3.48 (0.78)	.10	.24**	.12*	.24**	-.03	.66**	.01	.30**	.38**	.09	(.79)					
12. Openness to Exp.$_A$	3.59 (0.77)	.16**	.13*	.12	-.11	-.01	.09	.61**	.25**	-.03	.11	.23**	(.73)				
13. Conscientiousness$_R$	0.00 (0.55)	.08	.11	.00	-.05	-.02	.07	-.02	.87**	.28**	.16**	.28**	.22**	-			
14. Emotional Stability$_R$	0.00 (0.57)	.00	.12	-.08	.00	-.09	.18**	-.07	.31**	.78**	.13*	.30**	.05	.41**	-		
15. Agreeableness$_R$	0.00 (0.62)	.03	.04	-.03	-.09	.00	.04	.07	.15*	.09	.88**	.12	.12*	.19**	.20**	-	
16. Extraversion$_R$	0.00 (0.59)	.17**	.16**	.03	.05	-.07	.00	-.08	.29**	.22**	.08	.75**	.23**	.31**	.24**	.13*	-
17. Openness to Exp.$_R$	0.00 (0.61)	.08	.13*	-.04	-.10	-.04	.04	.00	.24**	.02	.07	.29**	.79**	.29**	.11	.10	.35**

Note. The numbers in the diagonal represent Cronbach's alpha of the scales. CWs = competitive worldviews (measured with 8 item scale). Cognitive abilities were measured with the Wonderlic Personnel Test. The subscript after the variable name indicates the source; $_H$ = honest condition, $_A$ = applicant condition, $_R$ = faking measured as regression-adjusted difference scores. Openness to Exp. = Openness to Experience. Paired sample t-tests showed significant effects for all five personality traits; Conscientiousness $t(267) = 7.81$; $p < .01$; $d = .48$, Emotional Stability $t(267) = 8.67$; $p < .01$; $d = .53$, Agreeableness $t(267) = 4.10$; $p < .01$; $d = .25$, Extraversion $t(267) = 4.73$; $p < .01$; $d = .29$, Openness to Experience $t(267) = 2.10$; $p < .05$; $d = .13$. Correlations are based on $N = 268$. *$p < .05$, **$p < .01$.

Table V.6

Regression Models for Faking on the Five Personality Traits in Sample 3

	Δ Conscientiousness		Δ Emotional Stability		Δ Agreeableness		Δ Extraversion		Δ Openness to Exp.	
Predictors	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*
(Intercept)	-0.01 (-0.07 – 0.06)	0.89	-0.02 (-0.09 – 0.06)	0.67	0.00 (-0.08 – 0.08)	0.99	-0.02 (-0.09 – 0.06)	0.67	0.01 (-0.07 – 0.08)	0.86
CWs	0.04 (-0.06 – 0.15)	0.40	-0.02 (-0.13 – 0.09)	0.72	0.02 (-0.10 – 0.13)	0.77	0.13 (0.02 – 0.24)	**0.02**	0.03 (-0.08 – 0.15)	0.56
Cogn. abil.	0.01 (-0.00 – 0.02)	0.12	0.01 (0.00 – 0.02)	**0.03**	0.00 (-0.01 – 0.01)	0.65	0.01 (0.00 – 0.02)	**0.04**	0.01 (-0.00 – 0.02)	0.09
IA	0.00 (-0.01 – 0.02)	0.60	0.01 (-0.00 – 0.03)	0.12	-0.00 (-0.02 – 0.02)	0.95	0.01 (-0.00 – 0.03)	0.12	-0.01 (-0.02 – 0.01)	0.52
R^2	0.016		0.024		0.002		0.051		0.020	

Note. Δ = Faking for the corresponding personality trait, measured as regression-adjusted difference score. Openness to Exp. = Openness to Experience; CWs = competitive worldviews; Cogn. abil. = cognitive abilities (measured with the Wonderlic Personnel Test); IA = Interaction between competitive worldviews and cognitive abilities. All predictors were centered to enhance interpretability of the results. Confidence intervals (95%) are given in brackets below the corresponding *b*'s (the unstandardized regression weights). $N = 268$. *p*-values below the 5% criterion are printed in bold.

Discussion

As in the previous samples, we did not find any systematic evidence for our two hypotheses in this third group. Moreover, we did not find the effect of competitive worldviews on faking behavior reported in previous studies in the interview context (Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016), and this relationship was not moderated by the participants' cognitive abilities. Again, all remaining key parameters (e.g., the effect sizes for faking) indicated that the study design worked as expected (Roulin et al., 2016). Furthermore, Sample 3 represents a broad cross section due to a larger age cohort and does not focus on a sample of academic students. We can therefore essentially rule out homogeneity of the participants and the associated restriction of variances as reasons for the negative results in the current study. Overall, the findings for this third sample support the conclusion that competitive worldviews are not as important for faking in personality tests as they are in the context of interviews. Moreover, cognitive abilities do not act as a moderator for this non-existent relationship. In the general discussion, we discuss possible reasons for these findings and their consequences.

General Discussion

Contribution to Theory

In response to calls from the authors of the dynamic model of faking behavior (Roulin et al., 2016), the present study investigated the motivational influence of competitive worldviews in conjunction with cognitive abilities as an aspect of the capacity to fake, for the first time in the area of personality assessment. Contrary to our expectations fueled by the results of job interview research, we found that the results regarding the relationship between competitive worldviews and faking cannot simply be generalized to personality assessment. In none of our three samples did we find any reliable evidence that competitive worldviews affected faking on any of the five personality dimensions examined, and our results did not

suggest a moderating effect of cognitive abilities. At this point, it should be noted that due to our approach with three different samples and the considerable sample sizes, test power problems should be largely ruled out as the cause for this unexpected outcome. Furthermore, our study results are unlikely to be attributable to methodological problems in the assessment of competitive worldviews and cognitive abilities, because we employed different and carefully validated methods in all three samples. In the light of our findings, we would like to present two potential explanations in the next paragraphs, which in turn may have very different implications for the canon of faking research.

In the simplest case, the results regarding competitive worldviews from the domain of job interviews may not be generalizable to personality assessment because applicants might perceive competition in the two selection situations differently. With regard to personality tests, organizations often invite applicants for many different positions to attend large group tests, or the procedure even takes place completely online. Here, the competitive situation is more like a school exam, in which the objective is to prove one's own suitability, rather than a fight between applicants. However, once applicants have made it to the job interview stage, it may become clearer that it is now a matter of competing directly with others who have also made it this far. Following the arguments of Roulin and Krings (2016, p. 646), "competitive worldviews are particularly influential when competition with others is salient." We may therefore not have been able to replicate the results from the interview context because competition with others may not be as salient in personality tests as in job interviews. Accordingly, competitive worldviews may have different effects on faking motivation and faking behavior in these two types of selection procedure: (a) selection procedures in which applicants interact directly with each other (i.e., in which the competitors are directly obvious) and (b) selection procedures in which it is clear to applicants that they only have to compete with a small number of equally qualified others (i.e., at the end of a multi-level selection process). In general, this argument also implies that the assumptions regarding competitive worldviews in the dynamic model of

applicant faking (Roulin et al., 2016) may fit better with some types of selection procedure than with others.

A different explanation may lie in the differences in study design. Our study examined faking using a laboratory-based within-subject faking design for all three samples – a design which is widely used in current faking research (Burns & Christiansen, 2011) – whereas studies in the context of job interviews focused on self-reports of faking intention or previous faking behavior (e.g., Roulin & Krings, 2016). However, the within-subject faking paradigm, in which participants complete a personality test under different instructions, is not without criticism. Ones, Viswesvaran and Reiss (1996), for example, pointed out that the mental processes underlying the completion of a personality test might differ between laboratory and field situations. Corresponding empirical evidence can be seen in the different effect sizes (Birkeland et al., 2006; Hooper, 2007), as well as in discrepancies between the two research approaches regarding the construct validity of personality tests (Schilling et al., 2016). In all three of our samples, we found significant faking effects insofar as the participants achieved higher personality scores in the applicant conditions. However, in all samples, we also found high to very high correlations between the personality scores of the two conditions (r = .47 – .91) – lying in the range of what could be expected from previous research, but in the upper part of the distribution. In contrast to previous research (e.g., McFarland & Ryan, 2000; Raymark & Tafero, 2009), these findings in particular indicate that there was rather little variance in the faking of our participants and that all of them seem to have distorted their scores to a similar degree. Based on the assumption that faking behavior is the product of a motivational and an ability component (e.g., McFarland & Ryan, 2006; Roulin et al., 2016), such a uniform faking effect could be interpreted as suggesting that there were few individual differences between our participants in these two components. In our opinion, the manipulation through instruction or cover story in such a laboratory setting could lead to an equally strong faking motivation in all participants, regardless of the individual antecedents of this motivational aspect of faking. In

line with this idea, it might be unsurprising that we were unable to find any effect of competitive worldviews in this specific setting.

Both presented explanations assume that motivational differences between the participants played only a minor role in our specific study. According to the proposed motivation/ability relationship (e.g., McFarland & Ryan, 2006; Roulin et al., 2016; Snell et al., 1999), cognitive abilities should then be the main predictor of faking behavior in this case. However, we found this direct effect of cognitive abilities only in the third sample, where it only emerged for two of the five dimensions. This may be due to the fact that faking in a personality test with single-stimulus items, as used in this study, may only require a minimum level of cognitive ability. If applicants possess a minimum level of ability to identify what the socially desired answers to the items in such a personality questionnaire are, there might not be any additional benefits of cognitive abilities for faking behavior. In our opinion, the effect of cognitive abilities on faking behavior might therefore be more pronounced in self-assessment tools where faking is more cognitively challenging, such as forced-choice personality tests (Schilling et al., 2016; Vasilopoulos, Cucina, Dyomina, Morewitz, & Reilly, 2006).

Future Research Directions

The two theoretical ideas mentioned above give rise to concrete suggestions for further research. If selection procedures differ in the extent to which applicants perceive competition among each other, future research should look at the relationship between competitive worldviews and faking selection procedures in which competition between applicants is more or less salient. For example, assessment centers could be of particular interest for research, since they are usually only carried out with applicants who have reached a shortlist, and also involve direct interaction between applicants. In such situations, we would expect even higher effects of competitive worldviews on faking than in interviews.

Following our second line of argument, our findings support the idea put forward by Ones et al. (1996) that the processes in applicants' minds are not the same in a laboratory

situation as they are in a real application situation. This might be especially problematic considering that many of the findings from faking research are based on such within-subject designs (e.g., Pelt, Linden, & Born, 2018; Tett et al., 2012; van Hooft & Born, 2012), while the distinct motivational character of these designs might limit the transferability of corresponding results to real-life faking. Therefore, in our opinion, it might be a good strategy for further faking researchers to focus more on approaches with real applicants and on real application situations. Due to the practical difficulties involved, it may also be useful to refer to applicants' self-reported behavior during past selection situations, as was done recently in the context of job interviews (Bourdage et al., 2018; Roulin & Krings, 2016).

Implications for Personnel Selection

Understandably, every organization that has to select applicants tries to find those who will go on to be the most successful. In the same way, it is also understandable that applicants seek to present themselves in the best possible way to a future employer. The situation only becomes problematic when some applicants distort their answers more than others, and as a result, the company no longer selects the most suitable applicants (e.g., Christiansen et al., 1994; Donovan et al., 2014; Rosse et al., 1998). In this context, many authors suggest that the subjective perception of the competition for a job can have a considerable influence on individual faking (cf. Roulin et al., 2016; Tett & Simonet, 2011). However, considering our findings in relation to previous research efforts on competitive worldviews (Bourdage et al., 2018; Roulin & Bourdage, 2017; Roulin & Krings, 2016), it seems that competitive worldviews, as an aspect of this perception, play only a subordinate role in personality tests. It is precisely this finding that could have interesting consequences for the practical use of self-report procedures in the selection process. In our opinion, competitive worldviews might be a strong predictor of applicant faking especially if the competitive nature of the situation is quite salient – if the applicants directly see that they are in competition with other applicants. If organizations wish to minimize the influence of competitive worldviews on the final selection

decision, it might be a good idea to avoid such a situation as far as possible. In this context, online testing might have an advantage over group testing on site.

Limitations

Two main limitations of the present study need to be mentioned. First, the participants in our samples are exclusively young people at the beginning of their working lives. We imposed this restriction deliberately because we considered this group of people to be particularly relevant to the context addressed in our study. As described in the introductions to the individual samples, employers as well as universities may be especially likely to use personality tests for their selection decisions with young applicants. Nevertheless, the question remains whether the corresponding results can be generalized to all age groups, especially given that some empirical studies suggest less faking among older workers (e.g., Ispas et al., 2014). Second, the personality tests used in this study (BFI-K; John et al., 2008; BFI; Rammstedt & John, 2005) are not commercial selection tools used in practice, but rather personality scales from the area of differential psychological research. Therefore, the ability to generalize our findings to commercial selection tools with a stronger focus on work and workplace-related personality may be limited. However, the personality tests used in this study have proven to be suitable for this field of research in other studies (e.g., Fell & König, 2016; Komar, Komar, Robie, & Taggar, 2010).

Conclusion

The goal of this study was to examine the assumptions put forward in the recently presented dynamic model of faking behavior regarding the relationship between competitive worldviews, cognitive abilities and faking for the domain of personality testing. Despite three comprehensive laboratory samples and different operationalizations of the constructs, we were unable to replicate the effects found in the context of job interviews. Moreover, in contrast to previous research findings, all participants in our samples showed similarly pronounced faking behavior. This may lead to two possible conclusions: Either the applicants are less aware of the

competitive situation in personality testing, meaning that competitive worldviews have little influence, or laboratory studies are less suitable to investigate factors influencing faking motivation due to their specific motivational character. Both options should be taken into account in future research.

References

Ashton, M., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, *91*, 340–345. https://doi.org/10.1080/00223890902935878

Bass, B. M. (1957). Faking by sales applicants of a forced choice personality inventory. *Journal of Applied Psychology*, *41*, 403–404. https://doi.org/10.1037/h0044670

Biderman, M. D., & Nguyen, N. T. (2009, April). *Measuring faking propensity*. Presented at the 24th Annual Conference of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Birkeland, S. A., Manson, T. M., Kisamore, J. L., Brannick, M. T., & Smith, M. A. (2006). A meta-analytic investigation of job applicant faking on personality measures. *International Journal of Selection and Assessment*, *14*, 317–335. https://doi.org/10.1111/j.1468-2389.2006.00354.x

Bourdage, J. S., Roulin, N., & Tarraf, R. (2018). "I (might be) just that good": Honest and deceptive impression management in employment interviews. *Personnel Psychology*, *71*, 597–632. https://doi.org/10.1111/peps.12285

Burns, G. N., & Christiansen, N. D. (2011). Methods of measuring faking behavior. *Human Performance*, *24*, 358–372. https://doi.org/10.1080/08959285.2011.597473

Carroll, J. B. (1997). The three-stratum theory of cognitive abilities. In *Contemporary intellectual assessment: Theories, tests, and issues* (pp. 122–130). New York, NY: Guilford.

Christiansen, N. D., Burns, G. N., & Montgomery, G. E. (2005). Reconsidering forced-choice item formats for applicant personality assessment. *Human Performance*, *18*, 267–307. https://doi.org/10.1207/s15327043hup1803_4

Christiansen, N. D., Goffin, R. D., Johnston, N. G., & Rothstein, M. G. (1994). Correction the 16PF for faking: Effects on criterion-related validity and individual hiring decisions. *Personnel Psychology*, *47*, 847–860. https://doi.org/10.1111/j.1744-6570.1994.tb01581.x

Christiansen, N. D., Rozek, R. F., & Burns, G. (2010). Effects of social desirability scores on hiring judgments. *Journal of Personnel Psychology*, *9*, 27–39. https://doi.org/10.1027/1866-5888/a000003

Diekmann, J., & König, C. J. (2015). Personality testing in personnel selection: Love it? Leave it? Understand it! In I. Nikolaou & J. K. Oostrom (Eds.), *Employee recruitment, selection, and assessment: Contemporary issues for theory and practice* (pp. 117–135). Hove, UK: Psychology Press.

Dodrill, C. B. (1983). Long-term reliability of the Wonderlic Personnel Test. *Journal of Consulting and Clinical Psychology*, *51*, 316–317. https://doi.org/10.1037/0022-006X.51.2.316

Donovan, J. J., Dwight, S. A., & Schneider, D. (2014). The impact of applicant faking on selection measures, hiring decisions, and employee performance. *Journal of Business and Psychology*, *29*, 479–493. https://doi.org/10.1007/s10869-013-9318-5

Douglas, S. P., & Craig, C. S. (2007). Collaborative and iterative translation: An alternative approach to back translation. *Journal of International Marketing*, *15*, 30–43. https://doi.org/10.1509/jimk.15.1.030

Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. *Advances in Experimental Social Psychology*, *33*, 41–113. https://doi.org/10.1016/S0065-2601(01)80004-6

Duckitt, J., Wagner, C., du Plessis, I., & Birum, I. (2002). The psychological bases of ideology and prejudice: Testing a dual process model. *Journal of Personality and Social Psychology*, *83*, 75–93. https://doi.org/10.1037//0022-3514.83.1.75

Ellingson, J. E., & McFarland, L. A. (2011). Understanding faking behavior through the lens of motivation: An application of VIE theory. *Human Performance*, *24*, 322–337. https://doi.org/10.1080/08959285.2011.597477

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*, 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fell, C. B., & König, C. J. (2016). Cross-cultural differences in applicant faking on personality tests: A 43-Nation study. *Applied Psychology: An International Review*, *65*, 671–717. https://doi.org/10.1111/apps.12078

Fisher, R. J. (1993). Social desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, *20*, 303–315. https://doi.org/10.1086/209351

Gnambs, T. (2014). A meta-analysis of dependability coefficients (test–retest reliabilities) for measures of the Big Five. *Journal of Research in Personality*, *52*, 20–28. https://doi.org/10.1016/j.jrp.2014.06.003

Goffin, R. D., & Boyd, A. C. (2009). Faking and personality assessment in personnel selection: Advancing models of faking. *Canadian Psychology*, *50*, 151–160. https://doi.org/10.1037/a0015946

Griffith, R. L., Chmielowski, T., & Yoshita, Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behavior. *Personnel Review*, *36*, 341–355. https://doi.org/10.1108/00483480710731310

Guttman, L., & Levy, S. (1991). Two structural laws for intelligence tests. *Intelligence*, *15*, 79–103. https://doi.org/10.1016/0160-2896(91)90023-7

Hogan, R., Hogan, J., & Roberts, B. W. (1996). Personality measurement and employment decisions: Questions and answers. *American Psychologist*, *51*, 469–477. https://doi.org/10.1037/0003-066X.51.5.469

Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics*, *6*, 65–70. Retrieved from JSTOR.

Hooper, A. C. (2007). *Self-presentation on personality measures in lab and field settings: A meta-analysis* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3273134)

Ispas, D., Iliescu, D., Ilie, A., Sulea, C., Askew, K., Rohlfs, J. T., & Whalen, K. (2014). Revisiting the relationship between impression management and job performance. *Journal of Research in Personality*, *51*, 47–53. https://doi.org/10.1016/j.jrp.2014.04.010

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York, NY: Guilford Press.

Klehe, U.-C., Kleinmann, M., Hartstein, T., Melchers, K. G., König, C. J., Heslin, P. A., & Lievens, F. (2012). Responding to personality tests in a selection context: The role of the ability to identify criteria and the ideal-employee factor. *Human Performance*, *25*, 273–302. https://doi.org/10.1080/08959285.2012.703733

Kleinmann, M., Ingold, P. V., Lievens, F., Jansen, A., Melchers, K. G., & König, C. J. (2011). A different look at why selection procedures work: The role of candidates' ability to identify criteria. *Organizational Psychology Review*, *1*, 128–146. https://doi.org/10.1177/2041386610387000

Komar, S., Komar, J. A., Robie, C., & Taggar, S. (2010). Speeding personality measures to reduce faking: A self-regulatory model. *Journal of Personnel Psychology*, *9*, 126–137. https://doi.org/10.1027/1866-5888/a000016

König, C. J., Hafsteinsson, L. G., Jansen, A., & Stadelmann, E. H. (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. https://doi.org/10.1111/j.1468-2389.2011.00562.x

König, C. J., Melchers, K. G., Kleinmann, M., Richter, G. M., & Klehe, U.-C. (2007). Candidates' ability to identify criteria in nontransparent selection procedures: Evidence from an assessment center and a structured interview. *International Journal of Selection and Assessment*, *15*, 283–292. https://doi.org/10.1111/j.1468-2389.2007.00388.x

Kreuzpointner, L. (2013). Konstruktionsrational der Kurzversion des LPS-2 (LPS-2K) [Construction rationale of the short version of the LPS-2 (LPS-2K)]. Retrieved October 30, 2017, from https://epub.uni-regensburg.de/35693/

Kreuzpointner, L., Lukesch, H., & Horn, W. (2013). *Leistungsprüfsystem 2. LPS-2. Manual [Leistungsprüfsystem 2. LPS-2. manual]*. Retrieved from https://epub.uni-regensburg.de/27958/

Lang, F. R., Lüdtke, O., & Asendorpf, J. B. (2001). Testgüte und psychometrische Äquivalenz der deutschen Version des Big Five Inventory (BFI) bei jungen, mittelalten und alten Erwachsenen [Test quality and psychometric equivalence of the German version of the Big Five Inventory (BFI) in young, middle-aged and old adults]. *Diagnostica*, *47*, 111–121. https://doi.org/10.1026//0012-1924.47.3.111

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research*, *39*, 329–358. https://doi.org/10.1207/s15327906mbr3902_8

Levashina, J., & Campion, M. A. (2006). A model of faking likelihood in the employment interview. *International Journal of Selection and Assessment*, *14*, 299–316. https://doi.org/10.1111/j.1468-2389.2006.00353.x

Levashina, J., & Campion, M. A. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology*, *92*, 1638–1656. https://doi.org/10.1037/0021-9010.92.6.1638

Liepmann, D., Beauducel, A., Brocke, B., & Nettelnstroth, W. (2012). *IST-Screening. Intelligenz-Struktur-Test-Screening [IST-Screening. Intelligence-Structure-Test-Screening]*. Göttingen, Germany: Hogrefe.

Liepmann, D., Beauducel, A., Brocke, B., & Wim Nettelnstroth. (2007). *I-S-T 2000 R. Intelligenz-Struktur-Test 2000 R [I-S-T 2000 R. Intelligence Structure Test 2000 R]* (2nd ed.). Göttingen, Germany: Hogrefe.

Marcus, B. (2009). 'Faking' from the applicant's perspective: A theory of self-presentation in personnel selection settings. *International Journal of Selection & Assessment*, *17*, 417–430. https://doi.org/10.1111/j.1468-2389.2009.00483.x

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, *27*, 267–298. https://doi.org/10.1016/S0160-2896(99)00016-1

McFarland, L. A., & Ryan, A. M. (2000). Variance in faking across noncognitive measures. *Journal of Applied Psychology*, *85*, 812–821. https://doi.org/10.1037/0021-9010.85.5.812

McFarland, L. A., & Ryan, A. M. (2006). Toward an integrated model of applicant faking behavior. *Journal of Applied Social Psychology*, *36*, 979–1016. https://doi.org/10.1111/j.0021-9029.2006.00052.x

McKelvie, S. J. (1989). The wonderlic personnel test: Reliability and validity in an academic setting. *Psychological Reports*, *65*, 161–162. https://doi.org/10.2466/pr0.1989.65.1.161

Neubauer, A., Koschmieder, C., Krammer, G., Mayr, J., Müller, F. H., Pflanzl, B., … Schaupp, H. (2017). TESAT – Ein neues Verfahren zur Eignungsfeststellung und Bewerberauswahl für das Lehramtsstudium [TESAT - A new assessment and selection tool for teaching students]. *Zeitschrift für Bildungsforschung*, *7*, 5–21. https://doi.org/10.1007/s35834-017-0178-3

Nguyen, N. T., Biderman, M. D., & McDaniel, M. A. (2005). Effects of response instructions on faking a situational judgment test. *International Journal of Selection and Assessment*, *13*, 250–260. https://doi.org/10.1111/j.1468-2389.2005.00322.x

O'Connor, B. P. (2000). SPSS and BAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments, & Computers*, *32*, 396–402. https://doi.org/10.3758/BF03200807

Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, *81*, 660–679. https://doi.org/10.1037/0021-9010.81.6.660

Oran, O. (2017, August 9). Goldman to use "personality test" for hiring decisions. *Reuters*. Retrieved from https://www.reuters.com/article/us-goldman-sachs-hiring-idUSKBN1AP2J7

Pauls, C. A., & Crost, N. W. (2005). Cognitive ability and self-reported efficacy of self-presentation predict faking on personality measures. *Journal of Individual Differences*, *26*, 194–206. https://doi.org/10.1027/1614-0001.26.4.194

Pelt, D. H. M., Linden, D. van der, & Born, M. P. (2018). How emotional intelligence might get you the job: The relationship between trait emotional intelligence and faking on

personality tests. *Human Performance*, *31*, 33–54. https://doi.org/10.1080/08959285.2017.1407320

Peterson, M. H., Griffith, R. L., Isaacson, J. A., O'Connell, M. S., & Mangos, P. M. (2011). Applicant faking, social desirability, and the prediction of counterproductive work behaviors. *Human Performance*, *24*, 270–290. https://doi.org/10.1080/08959285.2011.580808

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, *67*, 741–763. https://doi.org/10.1037/0022-3514.67.4.741

Rammstedt, B., & John, O. P. (2005). Kurzversion des Big Five Inventory (BFI-K) [Short version of the Big Five Inventory (BFI-K)]. *Diagnostica*, *51*, 195–206. https://doi.org/10.1026/0012-1924.51.4.195

Raymark, P. H., & Tafero, T. L. (2009). Individual differences in the ability to fake on personality measures. *Human Performance*, *22*, 86–103. https://doi.org/10.1080/08959280802541039

Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on preemployment personality testing and hiring decisions. *Journal of Applied Psychology*, *83*, 634–644. https://doi.org/10.1037/0021-9010.83.4.634

Roulin, N., & Bourdage, J. S. (2017). Once an impression manager, always an impression manager? Antecedents of honest and deceptive impression management use and variability across multiple job interviews. *Frontiers in Psychology*, *8*, 1–13. https://doi.org/10.3389/fpsyg.2017.00029

Roulin, N., & Krings, F. (2016). When winning is everything: The relationship between competitive worldviews and job applicant faking. *Applied Psychology: An International Review*, *65*, 643–670. https://doi.org/10.1111/apps.12072

Roulin, N., Krings, F., & Binggeli, S. (2016). A dynamic model of applicant faking. *Organizational Psychology Review*, *6*, 145–170. https://doi.org/10.1177/2041386615580875

Salgado, J. F. (2016). A theoretical model of psychometric effects of faking on assessment procedures: Empirical findings and implications for personality at work. *International Journal of Selection and Assessment*, *24*, 209–228. https://doi.org/10.1111/ijsa.12142

Schilling, M., Becker, N., Grabenhorst, M., & König, C. J. (2016, June). *The relationship between cognitive abilities and personality scores in selection situations: A meta-analysis*. Presented at the 4th European Network for Selection Researchers (ENESER) small group meeting, Amsterdam, The Netherlands.

Schuler, H., Hell, B., Trapmann, S., Schaar, H., & Boramir, I. (2007). Die Nutzung psychologischer Verfahren der externen Personalauswahl in deutschen Unternehmen: Ein Vergleich über 20 Jahre. [Use of personnel selection instruments in German organizations during the last 20 years.]. *Zeitschrift für Personalpsychologie*, *6*, 60–70. https://doi.org/10.1026/1617-6391.6.2.60

Schwabe, S. (2018). *Konstruktvalidität von Matrizentests: Betrachtung des Einflusses von Strategieanwendungen auf die Lösungswahrscheinlichkeit [Construct validity of matrices tests: Evaluating the the effect of strategy application on the solution probability]* (Unveröffentlichte Masterarbeit). Universität des Saarlandes, Saarbrücken, Deutschland.

Sibley, C. G., & Duckitt, J. (2009). Big-Five personality, social worldviews, and ideological attitudes: Further tests of a dual process cognitive-motivational model. *The Journal of Social Psychology*, *149*, 545–561. https://doi.org/10.1080/00224540903232308

Six, B., Wolfrath, U., & Zick, A. (2001). Autoritarismus und soziale Dominanz als generalisierte Einstellungen [Authoritarianism and social dominance as generalized attitudes]. *Zeitschrift für Politische Psychologie*, *9*, 23–40.

Snell, A. F., Sydell, E. J., & Lueke, S. B. (1999). Towards a theory of applicant faking: Integrating studies of deception. *Human Resource Management Review*, *9*, 219–242. https://doi.org/10.1016/S1053-4822(99)00019-4

Super, J. T. (2006). A survey of pre-employment psychological evaluation tests and procedures. *Journal of Police and Criminal Psychology*, *21*, 83–87. https://doi.org/10.1007/BF02855686

Tett, R. P., Freund, K. A., Christiansen, N. D., Fox, K. E., & Coaster, J. (2012). Faking on self-report emotional intelligence and personality tests: Effects of faking opportunity, cognitive ability, and job type. *Personality and Individual Differences*, *52*, 195–201. https://doi.org/10.1016/j.paid.2011.10.017

Tett, R. P., & Simonet, D. V. (2011). Faking in personality assessment: A "multisaturation" perspective on faking as performance. *Human Performance*, *24*, 302–321. https://doi.org/10.1080/08959285.2011.597472

Underhill, C. M., Bearden, R. M., & Chen, H. T. (2008). *Evaluation of the fake resistance of a forced-choice paired-comparison computer adaptive personality measure*. Mollington, TN: NAVY Personnel Research Studies ans Technology.

van Hooft, E. A. J., & Born, M. P. (2012). Intentional response distortion on personality tests: Using eye-tracking to understand response processes when faking. *Journal of Applied Psychology*, *97*, 301–316. https://doi.org/10.1037/a0025711

Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, *65*, 71–95. https://doi.org/10.1016/S0001-8791(03)00076-9

Vasilopoulos, N. L., Cucina, J. M., Dyomina, N. V., Morewitz, C. L., & Reilly, R. R. (2006). Forced-choice personality tests: A measure of personality and cognitive ability? *Human Performance*, *19*, 175–199. https://doi.org/10.1207/s15327043hup1903_1

Viswesvaran, C., & Ones, D. S. (1999). Meta-analyses of fakability estimates: Implications for personality measurement. *Educational and Psychological Measurement*, *59*, 197–210. https://doi.org/10.1177/00131649921969802

Viswesvaran, C., & Ones, D. S. (2000). Measurement error in "Big Five Factors" personality assessment: Reliability generalization across studies and measures. *Educational and Psychological Measuremen*, *60*, 224–235. https://doi.org/10.1177/00131640021970475

Weiss, B., & Feldman, R. S. (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. https://doi.org/10.1111/j.0021-9029.2006.00055.x

Wirth, R., & Seibert, N. (2011). PArcours - ein eignungsdiagnostisches Verfahren für Lehramtsstudierende der Universität Passau [PArcours - an assessment procedure for teacher training students at the university of Passau]. *Lehrerbildung auf dem Prüfstand*, *4*, 47–62.

Wonderlic, E. F., & Hovland, C. I. (1939). The Personnel Test: A restandardized abridgment of the Otis S-A test for business and industrial use. *Journal of Applied Psychology*, *23*, 685–702. https://doi.org/10.1037/h0056432

CHAPTER VI

GENERAL DISCUSSION

It was the aim of my dissertation to contribute to furthering the understanding of the phenomenon of faking by addressing two current research deficits in this domain. In this sense, my dissertation revealed (a) that applicants' cognitive abilities and personality scores correlate higher in selection situations than in non-selection situations, which suggests that cognitive abilities play a decisive role for successful applicant faking in personality tests; (b) that there are regional differences in faking, which are driven by regionally shared attitudes towards competition; and (c) that previous findings regarding attitudes towards competition as a predictor of faking (from the area of job interviews) cannot be generalized to personality tests in personnel selection.

In the general theoretical background section, I presented two current shortcomings of faking research that I wanted to address. First, I looked at the long-unanswered question of whether cognitive abilities are an important determinant of faking behavior when personality tests are used for selection. Study 1 meta-analytically summarized the findings from the last 50 years and thereby showed evidence for a corresponding relationship in general. Furthermore, this study revealed that cognitive abilities are much more closely linked to faking in laboratory studies than in field studies, where only a very small effect can be found. While this meta-analysis used the differences in the correlation between personality scores and cognitive abilities in selection and non-selection situations as a proxy for the link between cognitive abilities and faking, Study 3 aimed to measure this relationship directly. However, while the correlation patterns expected from the prior meta-analytic results did emerge in the three underlying subsamples, a direct effect of cognitive abilities on faking behavior could not be detected. In summary, the results of both studies indicate that although there is a relationship between an applicant's cognitive abilities and his or her faking behavior in personality tests,

this effect may be very limited in real selection situations. As such, these findings to some extent contradict the assumption held by the majority of faking theories (e.g., Marcus, 2009; Snell, Sydell, & Lueke, 1999; Tett & Simonet, 2011), in which cognitive abilities are seen as a rather important factor for successful faking. Perhaps, however, the concerns of many HR professionals may also be justified, and personality tests are actually very easy to fake (Rees & Metcalfe, 2003). In contrast, applicants' cognitive abilities might be a stronger determinant of successful faking behavior in the case of self-assessment tools in which faking is more difficult. Unfortunately, so far, there are rather few comparable primary studies on these selection tools (e.g., Buehl & Melchers, 2017; Buehl, Melchers, Macan, & Kühnel, 2019) that could be summarized in a meta-analysis. Overall, my dissertation provided a vital contribution to answering the question of whether cognitive abilities are an important determinant of faking. Although my results only cover personality tests, the further development of faking theories can benefit substantially from this knowledge.

Second, I looked at the motivational influence of competition on applicants' faking behavior from different perspectives. Here, Study 2 showed that applicants' competitive worldviews are a strong predictor of faking motivation on the individual level but also when aggregated on a regional level. These results indicate that applicants with higher competitive worldviews will have higher faking intentions in job interviews. Moreover, an individual with any given level of competitive worldviews will, on average, have higher faking intentions if he or she lives in a region with higher mean competitive worldviews. Study 3, on the other hand, was unable to generalize the relationship between competitive worldviews and faking to the context of personality testing. A correlation between the two variables was not found in any of the three subsamples. In summary, the results of these two studies can greatly enhance our understanding of the effect of competition on faking. First and foremost, the results from the interview context strongly supported the theoretical assumptions of the "dynamic model of applicant faking" (Roulin, Krings, & Binggeli, 2016). In contrast to many other studies, which

considered hard economic factors such as unemployment rates (e.g., Fell & König, 2016; König, Wong, & Cen, 2012; Thackray, Tryba, & Griffith, 2013), it was demonstrated for the first time that the degree of competition in a region also has an influence on faking. In this respect, it does not seem to be the degree of competition per se that has an effect on faking, but rather the applicants' perception thereof. This might also explain the findings from the personality test context in Study 3: Applicants might perceive the competition during a personality test quite differently to the competition during an interview. Precisely this aspect has not yet been taken into account in the research, but might explain differences between various self-assessment tools in terms of applicant faking in selection situations. Altogether, my dissertation can thus contribute two new important aspects to the canon of faking research, and significantly reduces the knowledge deficit regarding the influence of competition on faking.

In addition to the above-mentioned findings, in the course of my dissertation, a potential issue for current faking research arose which might have very far-reaching effects, at least for the context of personality tests: On the one hand, with regard to the relationship between cognitive abilities and faking, Study 1 found large discrepancies between laboratory and field studies. This indicates that the construct captured in laboratory studies does not fully correspond to the construct captured in real selection situations. On the other hand, the results of Study 3 showed that although laboratory studies find a similar degree of faking to field studies with actual applicants, the participants of such studies might show very little variance in their faking behavior. The high correlations between participants' personality scores under honest and faking conditions implied that the participants in this study distorted their scores to a very similar degree, which cannot be aligned with the findings of previous studies (e.g., McFarland & Ryan, 2000; Raymark & Tafero, 2009). The findings from both studies suggest, as already argued by Ones et al. (1996), that the underlying mental processes involved when completing a personality test may differ between laboratory and field situations.

To shed more light on this issue and to provide a first glimpse of the variance or uniformity of the faking behavior typically observed in similar faking studies, I will present some more data here. For the purpose of illustration, I summarized all suitable data that were included in Study 1 as well as data from seven unpublished studies which were conducted in the context of this doctoral project (25 studies in total, with 27 independent samples, were included in this additional analysis). To aggregate the correlations between honest and faking scores, the same approach as in Study 1 was used – meta-analysis of correlations using artifact distributions (Hunter & Schmidt, 2004). The forest plots in Figure VI.1 present an overview of the distribution of correlation coefficients found in the primary studies. As explained in Study 3, these correlations and the individual variance in faking are inversely proportional to each other. In other words, the higher the correlation between honest and faking personality scores is in a study, the more uniform is the faking behavior of the participants.

Table VI.1 provides an overview of the meta-analytical results – bare-bones mean *r* and artifact-corrected ρ – for the five personality traits. This analysis provided some very interesting first insights, even if the procedure does not reflect the stringent and systematic approach of a meta-analysis. The results showed that (a) there is meaningful variance within the laboratory studies independent of the measured trait (r_C = .18 – 87, r_{ES} = .19 – 87, r_A = .19 – 91, r_E = .16 – 91, r_O = .08 – 89)[8] and (b) a substantial proportion of studies (C = 14.8%, ES = 26.1%, A = 29.2%, E = 30.4%, O = 34.8%) showed very high correlations between faking and honest scores, which reached or even exceeded ranges assumed as test-retest reliability (Viswesvaran & Ones, 2000: rr_C = .76; rr_{ES} = .73; rr_A = .75; rr_E = .78; rr_O = .73).

Altogether, these findings provide evidence that participants' faking behavior in laboratory studies might often be very uniform. One reason for this might be rooted in the implicitly motivating character of the instructions given in these studies, which often provided

[8]Abbreviations for the Big five dimensions are used to facilitate readability. C = Conscientiousness, ES = Emotional Stability, A = Agreeableness, E = Extraversion, O = Openness to Experience.

all participants with a strong motivational incentive to fake to the same extent. Even without a direct request to fake (which was actually given in eight out of 27 samples, e.g., MacCann, 2013; van Hooft & Born, 2012), virtually all instructions were designed in a way that clearly signals to participants that they should not answer honestly but should rather aim to score as well as possible in the respective test. For example, in some studies, participants with the best results in the applicant condition received a specific monetary reward (in eight out of 27 samples, e.g., Biderman & Nguyen, 2009; Griffith et al., 2004). From the test-takers' point of view, however, the motivation provided by a one-off monetary incentive is hardly comparable to that of a well-paid job. While in laboratory studies, participants are offered the chance of a one-time, risk-free cash prize only if they fake sufficiently strongly, real applicants might be much more concerned about the consequences of their faking and are afraid of being caught out (König, Merz, & Trauffer, 2012). Even without such incentives, explicit descriptions of the job advertised and the requirements to be met (provided in 21 out of 27 samples, e.g., Christiansen, Burns, & Montgomery, 2005; Hale & Padgett, 2014) might have revealed to all participants of laboratory studies what behavior the particular researchers expected and implicitly demanded. Accordingly, the demand characteristics (Orne, 1962) of such laboratory studies and social biases like the "Good-Subject Effect" (Nichols & Maner, 2008) might explain the consistently high faking motivation of all participants and thus the resulting uniform faking behavior. Following this line of argument, the question arises whether or not the processes of actual faking in the selection context can be modeled in the simulated environment of a laboratory. At least from the perspective of this dissertation and for the context of personality tests, it does not appear to be the case. Therefore, I argue – even more strongly than Ones et al. (1996) – that faking in the laboratory is shaped by different cognitive processes than faking in real selection situations. This, in turn, raises the question of to what extent results from laboratory studies can be generalized to real selection situations, and whether recommendations

Table VI.1
Main Meta-Analytic Results

			Artifact Distribution				Bare-bones Meta-analysis			Meta-analysis with full correction for artifacts					
	k	*N*	r_{hh}	SD_{rhh}	r_{aa}	SD_{raa}	*r*	SD_r	*VAR* (%)	ρ	σ	*VAR* (%)	80%-CE-lb	80%-CE-ub	95%-CI-lb	95%-CI-ub
Conscientiousness	27	5,743	.95	.07	.88	.06	.520	.202	7.01	.612	.233	8.68	.308	.919	.518	.709
Emotional Stability	23	4,492	.85	.09	.86	.08	.569	.202	6.15	.684	.248	9.72	.357	1.012	.574	.795
Agreeableness	24	4,590	.79	.10	.81	.10	.570	.202	6.46	.721	.251	11.97	.400	1.061	.621	.840
Extraversion	23	4,492	.86	.08	.87	.08	.594	.237	4.34	.709	.278	6.81	.342	1.076	.586	.832
Openness	23	4,497	.79	.12	.81	.10	.610	.217	4.84	.805	.289	12.37	.423	1.186	.677	.932

Note. These meta-analytical calculations are based on the same methodological approach as in Study 1. *k* = Number of independent samples included in calculation, *N* = total number of participants in calculation, Openness = Openness to Experience; r_{hh} = average reliability of predictor; r_{ff} = average reliability of criterion; CE = credibility interval; CI = confidence interval; lb = lower bound; ub = upper bound.

Figure VI.1. Forest plots for the studies included in this analysis separately for each personality trait.

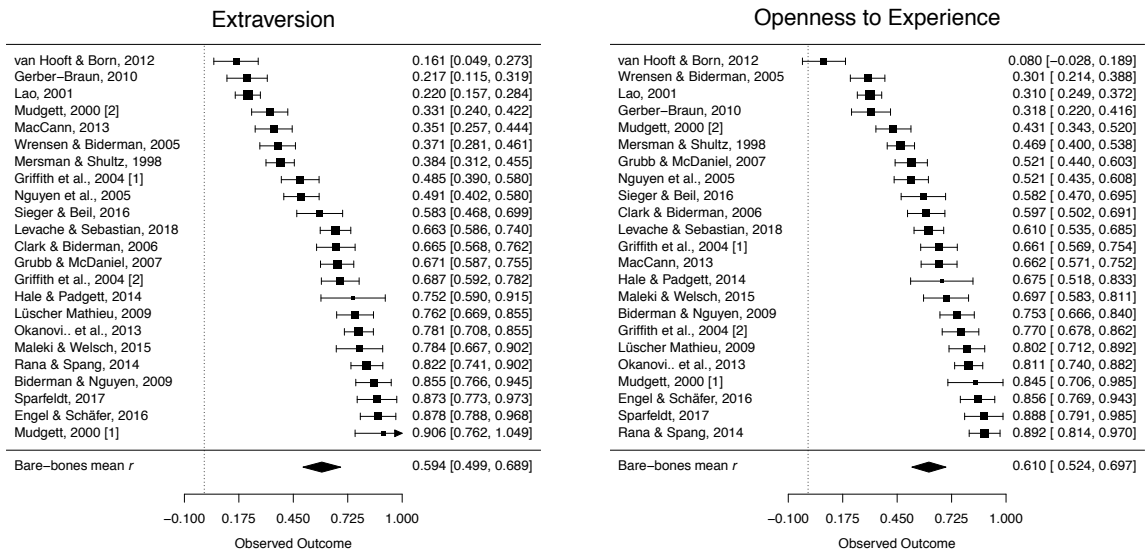

Figure VI.1 (continued)

for personnel selection should be derived from such results at all. A first step on the path to answering this question may already have been taken by König, Merz and Trauffer (2012), who examined the thoughts and ideas of test-takers in selection situations when responding to personality tests. Finally, only by undertaking such an in-depth analysis of the cognitive processes in the applicants' minds, and by drawing comparisons to participants of laboratory studies, might we pave the way to understanding the corresponding differences as well as the phenomenon of faking as a whole.

Limitations

Besides the imitations discussed in the subchapters of the corresponding studies (i.e., data collection using crowdsourcing, rather young study participants), there are three broader limitations of this dissertation.

First, none of the three studies took into account cultural differences that may occur between countries. Previous research has shown that predominant cultural norms and values in a country affect applicants' attitudes towards faking as well as their actual faking behavior (Fell & König, 2016; Fell, König, & Kammerhoff, 2016). Study 1 did not include such effects as meta-analytic moderators because the majority of studies were conducted in the United States

(79 of 115 independent samples). The remaining 36 samples were distributed evenly among twelve countries, meaning that the number of studies per country was not sufficient for a corresponding analysis. Studies 2 and 3 constituted some of the first research efforts to investigate the effect of perceived competition on faking. In order to be as specific and efficient as possible in this early phase of research, it was beyond the scope of these studies to include cultural differences. Developing this research idea regarding the perception of competition on a cross-country level, the most interesting cultural dimension might be *Performance Orientation* (Hofstede, 2001). This characteristic describes the role that competition plays in a society (Javidan, 2004) and thus overlaps strongly with the individual perception of competition and with competitive worldviews on a theoretical level. However, previous cross-cultural studies did not reveal any impact of this cultural dimension on faking (Fell & König, 2016; Fell et al., 2016), which at least partly contradicts the assumption of cultural effects on the relationship between applicants' perception of competition and their faking behavior. In general, however, further research should investigate whether the findings of this dissertation, especially those concerning regional differences in faking behavior within a country, can be replicated in other countries with different cultural backgrounds.

Second, all three studies presented here constitute basic research exploring the fundamental relationships between competitive worldviews, as a motivational aspect of faking, cognitive ability, as an ability aspect of faking, and their mutual interplay. In this sense, the findings of this dissertation substantially contribute to the theoretical understanding of faking and its antecedents, but might have rather little direct impact on the practice of personnel selection in organizations. In line with Bartunek & Rynes (2010), the relevant sections attempt to draw practitioners' attention to the complexity of the phenomenon of faking and thus give them new food for thought as well as important insights. Hence, even if the findings of this dissertation cannot contribute to solving the faking dilemma in organizations, they may help to break the black-and-white thinking of many practitioners and might thus prevent diagnostic

errors based on false assumptions (e.g., by using allegedly faking-specific reaction patterns to identify and exclude applicants; Robie, Tuzinski, & Bly, 2006).

Third, the data for the two primary studies in this dissertation were collected solely in the artificial environment of the laboratory or in the form of behavioral intentions for a future application procedure. In view of the differences to faking in real selection situations described above (in the general discussion section), this restriction may raise concerns about the generalizability of the findings to real applicants' faking behavior. However, this problem, which came to light during the course of this dissertation, might not only pertain to the present studies but may also extend to the majority of other studies in this area which studied faking outside of real selection situations. In this dissertation, potential consequences and specific limitations were identified at the corresponding points of the studies. Moreover, the dissertation provides the research community with a first data-supported outlook on this potential problem. In the long run, however, only further research which examines the differences between laboratory and field studies in terms of underlying mental processes, and also in terms of corresponding findings, might advance theoretical knowledge and research practice in the area of faking.

Future Research and Directions

As mentioned in the general limitations section, further research should look at the differences in findings between laboratory and field studies and also discuss methodological diversity within the group of laboratory studies. This seems particularly necessary for those domains of faking research in which the studied behavior is mainly caused by some kind of instruction and not based on any actual intrinsic motivation of the applicants. In a first step, future research might focus on faking in personality tests, since studies in this area have most frequently employed purely instruction-based designs (Burns & Christiansen, 2011). More specifically, a meta-analysis should be undertaken to determine the variance or uniformity of

participants' faking behavior within previous laboratory studies. In particular, the following methodological differences between studies might be considered as potential moderators: (a) whether or not the study instructions contained a direct prompt to fake; (b) how generically or specifically the job was described and how clearly the desired personal characteristics were stated; (c) whether and in what way the participants were motivated by a monetary incentive; (d) whether the participants were given a specific reference point when responding to the items (e.g., "the image of a perfect employee" or "oneself when one is trying extra hard"); and (e) the order in which honest and applicant conditions were completed, which may also affect the reference point when responding. The obtained results might then be combined (e.g., via meta-regression) with findings from previous meta-analyses in this area. These include, for instance, the meta-analysis by Hooper (2007), who studied the effect size of faking in various study designs, or with the results of Study 1 of this dissertation, which looked at the relationship of faking with cognitive abilities. Comparing the results from the laboratory studies with the findings from the few field studies that used a similar approach might also be worthwhile (e.g., with Merlini, Sudduth, Ricci-Twitchell, Kung, & Griffith, 2010, who compared the answers of job holders with their answers from the respective application process). Ultimately, the knowledge gained from such research could be used to evaluate the conclusions of previous studies with respect to the transferability to real selection situations, and could also be helpful for developing a standardized laboratory research approach which supports further transferability of results.

In addition, further research should look at the cognitive processes occurring in applicants' minds while they are faking in a self-assessment tool during selection. In this regard, two different approaches might be feasible. On the one hand, implicit methods could be used, which look, for instance, at gaze movements as indicators of attention and memory processes during faking. Van Hooft and Born (2012) have already used such an approach to examine faking in personality tests by conducting an eye-tracking study in the laboratory. However, due

to the latest technological developments in eye-tracking, similar research may now be carried out in the field, i.e. in real selection situations. In comparison to the very conspicuous and artificial test situation in the study by van Hooft and Born (2012), this new technology, such as that built into the new iPad Pro (Apple Inc., 2019), allows for hidden measurements without the applicant's knowledge and in natural selection settings. With this in mind, future research regarding classical selection procedures, such as personality tests, should make use of such technology to map applicants' cognitive processes during faking. In addition, faking behavior could also be studied in the same way within recently emerging technology-based selection procedures (see Langer, König, & Fitili, 2018; Langer, König, & Papathanasiou, 2019), which may require the corresponding tracking technology in any case. In general, the main advantage of such an implicit measurement should be the robustness of this approach against socially desirable response tendencies of applicants and study participants.

On the other hand, eye-tracking and similar techniques can only provide a very low-level and basic view of the cognitive processes in applicants' minds. To obtain a clear understanding of applicants' ideas and thoughts during selection, a more direct way of measurement might be appropriate. König et al. (2012) have already laid the groundwork for such an explicit approach, by developing a first taxonomy of applicants' thoughts regarding faking in personality tests. Based on these qualitative study findings, two of the Master theses which I supervised took first steps to develop a quantitative measure of applicants' faking goals and corresponding faking strategies. It became apparent that an exclusive focus on the aspect of faking is probably too short-sighted and that a more general view on test-takers' strategies, goals and thoughts, without the strict limitation to selection situations, might be more appropriate. To the best of my knowledge, even in the field of differential psychology, efforts to deal with the specific thoughts of test-takers have been solely theoretical in nature (e.g., Angleitner, John, & Löhr, 1986; Krosnick, 1999). Future research should therefore address this issue from a more empirical perspective. A feasible path for further research might be to look,

both qualitatively and also quantitatively, at the processes and thoughts in test-takers' minds during personality assessment and to compare selection and non-selection situations in a second step.

With regard to other self-assessment tools, again, barely any studies to date have explicitly looked at the thoughts of applicants or test-takers. Only in the context of job interviews is there the 'Interview Faking Behavior scale' by Levashina and Campion (2007), which measures self-reported faking behavior, a construct that overlaps with interviewees' faking strategies on a theoretical level. However, this does not take into account the interviewees' actual goals to be achieved by using the strategies or the faking behavior. This might limit the interpretability of the results, as applicants may choose the same strategy but for different reasons. For instance, 'not mention(ing) disagreements with the organization's philosophies' (Levashina & Campion, 2007, p. 1654) may result from the attempt to present oneself in the best way possible, but might also be a manifestation of the interviewee's courtesy and conformity. For this reason, future research in the interview context, but also regarding other selection tools, should endeavor to avoid considering faking strategies or self-reported faking behavior separately from the underlying motives and goals.

General Conclusion

In conclusion, this dissertation represents a further step towards understanding applicant faking in selection situations, but is certainly not the final step. Half a century of research in this field has brought many insights, but has also shown that this phenomenon is far more complex than assumed. At this point, it might be time to rethink previous, often very specific or synthetic faking research approaches and to focus more on a holistic perspective on this phenomenon in the real world of selection. In this way, faking research might not only yield further important insights, but might also pave the way for a better understanding of the needs and motives of all stakeholders – of the organizations, but also of the applicants.

References

Abrahams, N. M., Neumann, I., & Githens, W. H. (1971). Faking vocational interests: Simulated versus real life motivation. *Personnel Psychology*, *24*, 5–12. https://doi.org/10.1111/j.1744-6570.1971.tb00354.x

Anderman, E. M., & Danner, F. (2008). Achievement goals and academic cheating. *Revue Internationale de Psychologie Sociale*, *21*, 155–180. https://doi.org/10.1177/0956797613 487221

Angleitner, A., John, O. P., & Löhr, F.-J. (1986). It's what you ask and how you ask it: An itemmetric analysis of personality questionnaires. In A. Angleitner & J. S. Wiggins (Eds.), *Personality assessment via questionnaires* (pp. 61–108). Berlin, DE: Springer-Verlag.

Apple Inc. (2019). *Tracking and visualizing faces* [Apple Developer Documentation]. Retrieved June 30, 2019, from https://developer.apple.com/documentation/arkit/tracking_and_visualizing_faces

Ashton, M., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, *91*, 340–345. https://doi.org/10.1080/00223890902935878

Bangerter, A., Roulin, N., & König, C. J. (2012). Personnel selection as a signaling game. *Journal of Applied Psychology*, *97*, 719–738. https://doi.org/10.1037/a0026078

Bartunek, J. M., & Rynes, S. L. (2010). The construction and contributions of "Implications for Practice": What's in them and what might they offer? *Academy of Management Learning & Education*, *9*, 100–117. https://doi.org/10.5465/AMLE.2010.48661194

Becker, T. E., & Colquitt, A. L. (1992). Potential versus actual faking of a biodata form: An analysis along several dimensions of item type. *Personnel Psychology*, *45*, 389–406. https://doi.org/10.1111/j.1744-6570.1992.tb00855.x

Beil, L., & Sieger, S. C. (2016). *Fakingstrategien im Persönlichkeitstest: Eine explorative Untersuchung* (Unveröffentlichte Masterarbeit). Universität des Saarlandes, Saarbrücken, Deutschland.

Biderman, M. D., & Nguyen, N. T. (2009, April). *Measuring faking propensity*. Presented at the 24th Annual Conference of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Bing, M. N., Kluemper, D., Davison, H. K., Taylor, S., & Novicevic, M. (2011). Overclaiming as a measure of faking. *Organizational Behavior and Human Decision Processes*, *116*, 148–162. https://doi.org/10.1016/j.obhdp.2011.05.006

Bourdage, J. S., Roulin, N., & Tarraf, R. (2018). "I (might be) just that good": Honest and deceptive impression management in employment interviews. *Personnel Psychology*, *71*, 597–632. https://doi.org/10.1111/peps.12285

Buehl, A.-K., & Melchers, K. G. (2017). Individual difference variables and the occurrence and effectiveness of faking behavior in interviews. *Frontiers in Psychology*, *8*, 1–15. https://doi.org/10.3389/fpsyg.2017.00686

Buehl, A.-K., & Melchers, K. G. (2018). Do attractiveness and competition influence faking intentions in selection interviews? *Journal of Personnel Psychology*, *17*, 204–208. https://doi.org/10.1027/1866-5888/a000208

Buehl, A.-K., Melchers, K. G., Macan, T., & Kühnel, J. (2019). Tell me sweet little lies: How does faking in interviews affect interview scores and interview validity? *Journal of Business and Psychology*, *34*, 107–124. https://doi.org/10.1007/s10869-018-9531-3

Burns, G. N., & Christiansen, N. D. (2011). Methods of measuring faking behavior. *Human Performance*, *24*, 358–372. https://doi.org/10.1080/08959285.2011.597473

Christiansen, N. D., Burns, G. N., & Montgomery, G. E. (2005). Reconsidering forced-choice item formats for applicant personality assessment. *Human Performance*, *18*, 267–307. https://doi.org/10.1207/s15327043hup1803_4

Christiansen, N. D., Goffin, R. D., Johnston, N. G., & Rothstein, M. G. (1994). Correction the 16PF for faking: Effects on criterion-related validity and individual hiring decisions. *Personnel Psychology*, *47*, 847–860. https://doi.org/10.1111/j.1744-6570.1994.tb01581.x

Day, A. L., & Carroll, S. A. (2008). Faking emotional intelligence (EI): Comparing response distortion on ability and trait-based EI measures. *Journal of Organizational Behavior*, *29*, 761–784. https://doi.org/10.1002/job.485

Donovan, J. J., Dwight, S. A., & Schneider, D. (2014). The impact of applicant faking on selection measures, hiring decisions, and employee performance. *Journal of Business and Psychology*, *29*, 479–493. https://doi.org/10.1007/s10869-013-9318-5

Duckitt, J., Wagner, C., du Plessis, I., & Birum, I. (2002). The psychological bases of ideology and prejudice: Testing a dual process model. *Journal of Personality and Social Psychology*, *83*, 75–93. https://doi.org/10.1037//0022-3514.83.1.75

Dunlop, P. D., Telford, A. D., & Morrison, D. L. (2012). Not too little, but not too much: The perceived desirability of responses to personality items. *Journal of Research in Personality*, *46*, 8–18. https://doi.org/10.1016/j.jrp.2011.10.004

Ellingson, J. E., & McFarland, L. A. (2011). Understanding faking behavior through the lens of motivation: An application of VIE theory. *Human Performance*, *24*, 322–337. https://doi.org/10.1080/08959285.2011.597477

Fell, C. B., & König, C. J. (2016). Cross-cultural differences in applicant faking on personality tests: A 43-Nation study. *Applied Psychology: An International Review*, *65*, 671–717. https://doi.org/10.1111/apps.12078

Fell, C. B., König, C. J., & Kammerhoff, J. (2016). Cross-cultural differences in the attitude toward applicants' faking in job interviews. *Journal of Business and Psychology*, *31*, 65–85. https://doi.org/10.1007/s10869-015-9407-8

Furnham, A., Taylor, J., & Chamorro-Premuzic, T. (2008). Personality and intelligence correlates of assessment center exercises. *Individual Differences Research*, *6*, 181–192.

Garry, R. (1953). Individual differences in ability to fake vocational interests. *Journal of Applied Psychology*, *37*, 33–37. https://doi.org/10.1037/h0058887

Goffin, R. D., & Boyd, A. C. (2009). Faking and personality assessment in personnel selection: Advancing models of faking. *Canadian Psychology*, *50*, 151–160. https://doi.org/10.1037/a0015946

Graziano, W. G., & Eisenberg, N. (1997). Agreeableness: A dimension of personality. In R. T. Hogan, J. A. Johnson, & A. S. Briggs (Eds.), *Handbook of personality psychology* (pp. 795–824). San Diego, CA: Academic Press.

Griffith, R. L., Chmielowski, T., & Yoshita, Y. (2007). Do applicants fake? An examination of the frequency of applicant faking behavior. *Personnel Review*, *36*, 341–355. https://doi.org/10.1108/00483480710731310

Griffith, R. L., English, A., Yoshita, Y., Gujar, A., Monnot, M., Malm, T., & Graseck, M. (2004). Individual differences and applicant faking behavior: One of these applicants is not like the other. *N. D. Christiansen (Chair), Beyond Social Desirability in Research on Applicant Response Distortion. Symposium Conducted at the 19th Annual Conference of the Society for Industrial and Organizational Psychology*. Presented at the 19th Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.

Griffith, R. L., Lee, L. M., Peterson, M. H., & Zickar, M. J. (2011). First dates and little white lies: A trait contract classification theory of applicant faking behavior. *Human Performance*, *24*, 338–357. https://doi.org/10.1080/08959285.2011.597475

Griffith, R. L., Malm, T., English, A., Yoshita, Y., & Gujar, A. (2006). Applicant faking behavior: Teasing apart the influence of situational variance, cognitive biases, and

individual differences. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 151–178). Greenwich, CT: Information Age Publishing.

Grubb, W. L., III., & McDaniel, M. A. (2007). The fakability of Bar-On's emotional quotient inventory short form: Catch me if you can. *Human Performance*, *20*, 43–59. https://doi.org/10.1207/s15327043hup2001_3

Hale, R. L., & Padgett, R. J. (2014, May 22). *Take it but don't fake it: Using self-awareness to reduce fabrications on personality tests*. Presented at the 26th Annual Convention of the Association for Psychological Science, San Francisco, CA.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.

Hogan, J., Barrett, P., & Hogan, R. (2007). Personality measurement, faking, and employment selection. *Journal of Applied Psychology*, *92*, 1270–1285. https://doi.org/10.1037/0021-9010.92.5.1270

Holden, R. R., & Book, A. S. (2009). Using hybrid rasch-latent class modeling to improve the detection of fakers on a personality inventory. *Personality and Individual Differences*, *47*, 185–190. https://doi.org/10.1016/j.paid.2009.02.024

Hooper, A. C. (2007). *Self-presentation on personality measures in lab and field settings: A meta-analysis* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3273134)

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings*. Thousand Oaks, CA: SAGE Publications.

Javidan, M. (2004). Performance orientation. In R. J. House, P. J. Hanges, P. W. Dorfman, & V. Gupta, *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 239–281). Thousand Oaks, CA: Sage publications.

Johnson, J. A., & Hogan, R. (2006). A socioanalytic view of faking. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 209–231). Greenwich, CT: Information Age Publishing.

Kashy, D. A., & DePaulo, B. M. (1996). Who lies? *Journal of Personality and Social Psychology*, *70*, 1037–1051. https://doi.org/10.1037/0022-3514.70.5.1037

Klehe, U.-C., Kleinmann, M., Hartstein, T., Melchers, K. G., König, C. J., Heslin, P. A., & Lievens, F. (2012). Responding to personality tests in a selection context: The role of the ability to identify criteria and the ideal-employee factor. *Human Performance*, *25*, 273–302. https://doi.org/10.1080/08959285.2012.703733

Kleinmann, M., Ingold, P. V., Lievens, F., Jansen, A., Melchers, K. G., & König, C. J. (2011). A different look at why selection procedures work: The role of candidates' ability to identify criteria. *Organizational Psychology Review*, *1*, 128–146. https://doi.org/10.1177/2041386610387000

König, C. J., Hafsteinsson, L. G., Jansen, A., & Stadelmann, E. H. (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. https://doi.org/10.1111/j.1468-2389.2011.00562.x

König, C. J., Melchers, K. G., Kleinmann, M., Richter, G. M., & Klehe, U.-C. (2006). The relationship between the ability to identify evaluation criteria and integrity test scores. *Psychological Science*, *48*, 369–377.

König, C. J., Melchers, K. G., Kleinmann, M., Richter, G. M., & Klehe, U.-C. (2007). Candidates' ability to identify criteria in nontransparent selection procedures: Evidence from an assessment center and a structured interview. *International Journal of Selection and Assessment*, *15*, 283–292. https://doi.org/10.1111/j.1468-2389.2007.00388.x

König, C. J., Merz, A. -S., & Trauffer, N. (2012). What is in applicants' minds when they fill out a personality test? Insights from a qualitative study. *International Journal of Selection and Assessment*, *20*, 442–452. https://doi.org/10.1111/ijsa.12007

König, C. J., Wong, J., & Cen, G. (2012). How much do chinese applicants fake? *International Journal of Selection & Assessment*, *20*, 247–250. https://doi.org/10.1111/j.1468-2389.2012.00596.x

Krosnick, J. A. (1999). Survey research. *Annual Review of Psychology*, *50*, 537–567. https://doi.org/10.1146/annurev.psych.50.1.537

Langer, M. (2018). *Investigating technologically advanced job interview approaches* (Unpublished dissertation). Universität des Saarlandes, Saarbrücken, Deutschland.

Langer, M., König, C. J., & Fitili, A. (2018). Information as a double-edged sword: The role of computer experience and information on applicant reactions towards novel technologies for personnel selection. *Computers in Human Behavior*, *81*, 19–30. https://doi.org/10.1016/j.chb.2017.11.036

Langer, M., König, C. J., & Papathanasiou, M. (2019). Highly automated job interviews: Acceptance under the influence of stakes. *International Journal of Selection and Assessment*, *Advance online publication*. https://doi.org/10.1111/ijsa.12246

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research*, *39*, 329–358. https://doi.org/10.1207/s15327906mbr3902_8

Lester, C., Anglim, J., & Fullarton, C. (2015). Individual differences in intention to fake job interviews: Personality, self-monitoring, and the theory of planned behaviour. *Australasian Journal of Organisational Psychology*, *8*, 1–11. https://doi.org/10.1017/orp.2015.7

Levache, J. (2018). *Der Prozess des Fakings: Strategien und Ziele während des Ausfüllens von Persönlichkeitstests unter Auswahlbedingungen* (Unveröffentlichte Masterarbeit). Universität des Saarlandes, Saarbrücken, Deutschland.

Levashina, J., & Campion, M. A. (2006). A model of faking likelihood in the employment interview. *International Journal of Selection and Assessment*, *14*, 299–316. https://doi.org/10.1111/j.1468-2389.2006.00353.x

Levashina, J., & Campion, M. A. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology*, *92*, 1638–1656. https://doi.org/10.1037/0021-9010.92.6.1638

Levashina, J., Morgeson, F. P., & Campion, M. A. (2009). They don't do it often, but they do it well: Exploring the relationship between applicant mental abilities and faking. *International Journal of Selection and Assessment*, *17*, 271–281. https://doi.org/10.1111/j.1468-2389.2009.00469.x

Levashina, J., Weekley, J. A., Roulin, N., & Hauck, E. (2014). Using blatant extreme responding for detecting faking in high-stakes selection: Construct validity, relationship with general mental ability, and subgroup differences. *International Journal of Selection and Assessment*, *22*, 371–383. https://doi.org/10.1111/ijsa.12084

Macan, T. (2009). The employment interview: A review of current studies and directions for future research. *Human Resource Management Review*, *19*, 203–218. https://doi.org/10.1016/j.hrmr.2009.03.006

MacCann, C. (2013). Instructed faking of the HEXACO reduces facet reliability and involves more Gc than Gf. *Personality and Individual Differences*, *55*, 828–833. https://doi.org/10.1016/j.paid.2013.07.007

Marcus, B. (2006). Relationships between faking, validity, and decision criteria in personnel selection. *Psychology Science*, *48*, 226–246.

Marcus, B. (2009). 'Faking' from the applicant's perspective: A theory of self-presentation in personnel selection settings. *International Journal of Selection & Assessment*, *17*, 417–430. https://doi.org/10.1111/j.1468-2389.2009.00483.x

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, *27*, 267–298. https://doi.org/10.1016/S0160-2896(99)00016-1

Mayfield, E. C. (1964). The selection interview – A re-evaluation of published research. *Personnel Psychology*, *17*, 239–260. https://doi.org/10.1111/j.1744-6570.1964.tb00065.x

McCrae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins's circumplex and the five-factor model. *Journal of Personality and Social Psychology*, *56*, 586–595. https://doi.org/10.1037/0022-3514.56.4.586

McFarland, L. A., & Ryan, A. M. (2000). Variance in faking across noncognitive measures. *Journal of Applied Psychology*, *85*, 812–821. https://doi.org/10.1037/0021-9010.85.5.812

McFarland, L. A., & Ryan, A. M. (2006). Toward an integrated model of applicant faking behavior. *Journal of Applied Social Psychology*, *36*, 979–1016. https://doi.org/10.1111/j.0021-9029.2006.00052.x

Merlini, P., Sudduth, M. M., Ricci-Twitchell, M., Kung, M.-C., & Griffith, R. (2010). *The smart or right choice: Exploring job-related intelligence and faking*. Presented at the 25th Annual Conference of the Society for Industrial and Organizational Psychology, Atlanta, GA.

Morgeson, F. P., Campion, M. A., Dipboye, R. L., Hollenbeck, J. R., Murphy, K., & Schmitt, N. (2007). Reconsidering the use of personality tests in personnel selection contexts. *Personnel Psychology*, *60*, 683–729. https://doi.org/10.1111/j.1744-6570.2007.00089.x

Mudgett, B. O. (2000). *Individual and situational influences on distortion of personality tests* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 9969296)

Mueller-Hanson, R. A., Heggestad, E. D., & Thornton, G. C., III. (2006). Individual differences in impression management: An exploration of the psychological processes underlying faking. *Psychology Science*, *48*, 288–312.

Nichols, A. L., & Maner, J. K. (2008). The good-subject effect: Investigating participant demand characteristics. *The Journal of General Psychology*, *135*, 151–166. https://doi.org/10.3200/GENP.135.2.151-166

O'Neill, T. A., Lee, N. M., Radan, J., Law, S. J., Lewis, R. J., & Carswell, J. J. (2013). The impact of "non-targeted traits" on personality test faking, hiring, and workplace deviance. *Personality and Individual Differences*, *55*, 162–168. https://doi.org/10.1016/j.paid.2013.02.027

Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, *81*, 660–679. https://doi.org/10.1037/0021-9010.81.6.660

Orne, M. T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, *17*, 776–783. https://doi.org/10 .1037/h0043424

Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, *66*, 1025–1060. https://doi.org/10.1111/1467-6494.00041

Pauls, C. A., & Crost, N. W. (2005). Cognitive ability and self-reported efficacy of self-presentation predict faking on personality measures. *Journal of Individual Differences*, *26*, 194–206. https://doi.org/10.1027/1614-0001.26.4.194

Raymark, P. H., & Tafero, T. L. (2009). Individual differences in the ability to fake on personality measures. *Human Performance*, *22*, 86–103. https://doi.org/10.1080/08959280802541039

Rees, C. J., & Metcalfe, B. (2003). The faking of personality questionnaire results: Who's kidding whom? *Journal of Managerial Psychology*, *18*, 156–165. https://doi.org/10.1108/02683940310465045

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology*, *51*, 649–660. https://doi.org/10.1037/0022-3514.51.3.649

Roberts, B. W., Lejuez, C., Krueger, R. F., Richards, J. M., & Hill, P. L. (2014). What is conscientiousness and how can it be assessed? *Developmental Psychology*, *50*, 1315–1330. https://doi.org/10.1037/a0031109

Robie, C., Tuzinski, K. A., & Bly, P. R. (2006). A survey of assessor beliefs and practices related to faking. *Journal of Managerial Psychology*, *21*, 669–681. https://doi.org/10.1108/02683940610690204

Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on preemployment personality testing and hiring decisions. *Journal of Applied Psychology*, *83*, 634–644. https://doi.org/10.1037/0021-9010.83.4.634

Roulin, N., & Bourdage, J. S. (2017). Once an impression manager, always an impression manager? Antecedents of honest and deceptive impression management use and variability across multiple job interviews. *Frontiers in Psychology*, *8*, 1–13. https://doi.org/10.3389/fpsyg.2017.00029

Roulin, N., & Krings, F. (2016). When winning is everything: The relationship between competitive worldviews and job applicant faking. *Applied Psychology: An International Review*, *65*, 643–670. https://doi.org/10.1111/apps.12072

Roulin, N., Krings, F., & Binggeli, S. (2016). A dynamic model of applicant faking. *Organizational Psychology Review*, *6*, 145–170. https://doi.org/10.1177/2041386615580875

Ruch, F. L. (1942). A technique for detecting attempts to fake performance on a self-inventory type of personality test. In J. F. Dashiell (Ed.), *Studies in personality* (pp. 229–234). New York: NY: McGraw Hill.

Rynes, S. L., Brown, K. G., & Colbert, A. E. (2002). Seven common misconceptions about human resource practices: Research findings versus practitioner beliefs. *Academy of Management Executive*, *16*, 92–103.

Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*, *124*, 262–274. https://doi.org/10.1037/0033-2909.124.2.262

Schmidt, F. L., Oh, I.-S., & Shaffer, J. A. (2016). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 100 years of research findings. Retrieved October 12, 2018, from www.researchgate.net/publication/309203898

Snell, A. F., Sydell, E. J., & Lueke, S. B. (1999). Towards a theory of applicant faking: Integrating studies of deception. *Human Resource Management Review*, *9*, 219–242. https://doi.org/10.1016/S1053-4822(99)00019-4

Spencer, D. (1938). The frankness of subjects on personality measures. *Journal of Educational Psychology*, *29*, 26–35. https://doi.org/10.1037/h0061518

Tett, R. P., Freund, K. A., Christiansen, N. D., Fox, K. E., & Coaster, J. (2012). Faking on self-report emotional intelligence and personality tests: Effects of faking opportunity, cognitive ability, and job type. *Personality and Individual Differences*, *52*, 195–201. https://doi.org/10.1016/j.paid.2011.10.017

Tett, R. P., & Simonet, D. V. (2011). Faking in personality assessment: A "multisaturation" perspective on faking as performance. *Human Performance*, *24*, 302–321. https://doi.org/10.1080/08959285.2011.597472

Thackray, M., Tryba, B., & Griffith, R. L. (2013, April). *Don't mind stealing bread if I'm hungry: Recession and faking*. Presented at the 28th Annual Conference of the Society for Industrial and Organizational Psychology, Houston, TX.

Truxillo, D. M., Bauer, T. N., McCarthy, J. M., Anderson, N., & Ahmed, S. M. (2017). Applicant perspectives on employee selection systems. In D. Ones, N. Anderson, C. Viswesvaran, & H. K. Sinangil, *The SAGE Handbook of Industrial, Work and Organizational Psychology: Personnel Psychology and Employee Performance* (2nd ed., pp. 508–532). https://doi.org/10.4135/9781473914940.n19

Underhill, C. M., Bearden, R. M., & Chen, H. T. (2008). *Evaluation of the fake resistance of a forced-choice paired-comparison computer adaptive personality measure* (Technical Report No. NPRST-TR-08-2). Millington, TN: NAVY Personnel Research, Studies, and Technology.

van Hooft, E. A. J., & Born, M. Ph. (2012). Intentional response distortion on personality tests: Using eye-tracking to understand response processes when faking. *Journal of Applied Psychology*, *97*, 301–316. https://doi.org/10.1037/a0025711

Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, *65*, 71–95. https://doi.org/10.1016/S0001-8791(03)00076-9

Vasilopoulos, N. L., Cucina, J. M., & McElreath, J. M. (2005). Do warnings of response verification moderate the relationship between personality and cognitive ability? *Journal of Applied Psychology*, *90*, 306–322. https://doi.org/10.1037/0021-9010.90.2.306

Viswesvaran, C., & Ones, D. S. (2000). Measurement error in "Big Five Factors" personality assessment: Reliability generalization across studies and measures. *Educational and Psychological Measuremen*, *60*, 224–235. https://doi.org/10.1177/00131640021970475

Weiss, B., & Feldman, R. S. (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. https://doi.org/10.1111/j.0021-9029.2006.00055.x

Wrensen, L. B., & Biderman, M. D. (2005). Factors related to faking ability: A structural equation model application. *20th Annual Conference of The Society for Industrial and Organizational Psychology, Los Angeles, CA. April*.

Zickar, M. J., & Gibby, R. E. (2006). A history of faking and socially desirable responding on personality tests. In R. L. Griffith & M. H. Peterson (Eds.), *A closer examination of applicant faking behavior* (pp. 21–42). Greenwich, CT: Information Age Publishing.

APPENDICES

Appendix A

Supplement Material for Chapter III

Appendix A Table 1
Overview Studies

ID_{Study}	Author(s)	Language	Origin
1	Arthur, Glaze, Villado, & Taylor, 2010	English	forward
2	Bangerter, Corvalan, & Cavin, 2014	English	forward
3	Bing, Kluemper, Davison, Taylor, & Novicevic, 2011	English	forward
4	Bing, Whanger, Davison, & VanHook, 2004	English	forward
5	Christiansen, Burns, & Montgomery, 2005	English	forward
6	Converse et al., 2008	English	forward
7	Gerber-Braun, 2010	German	forward
8	Goffin, Jang, & Skinner, 2011	English	forward
9	Grubb & McDaniel, 2007	English	forward
10	Hausknecht, 2010	English	forward
11	Huws, Reddy, & Talcott, 2009	English	forward
12	Klehe et al., 2012	English	forward
13	Komar, Komar, Robie, & Taggar, 2010	English	forward
14	Labrador, 2006	English	forward
15	Lao, 2001	English	forward
16	Levashina, Weekley, Roulin, & Hauck, 2014	English	forward
17	MacCann, 2013	English	forward
18	MacKenzie, Ployhart, Weekley, & Ehlers, 2010	English	forward
19	Martin, 2011	English	forward
20	Nguyen, 2012	English	forward
21	Nguyen, Biderman, & McDaniel, 2005	English	forward
22	Okanović, Okanović, Mitrović, & Majstorović, 2013	English	forward
23	Peterson, Griffith, & Converse, 2009	English	forward
24	Preckel & Schüpbach, 2005	German	forward
25	Robie, Komar, & Brown, 2010	English	forward
26	Schermer, Carswell, & Jackson, 2012	English	forward
27	Tett, Freund, Christiansen, Fox, & Coaster, 2012	English	forward
28	Thumin, 1994	English	forward
29	Vasilopoulos, Cucina, Dyomina, Morewitz, & Reilly, 2006	English	forward
30	Vasilopoulos, Cucina, & McElreath, 2005	English	forward
31	Ziegeler, 2012	German	forward
32	Ziegler & Buehner, 2009	English	forward
33	Krammer & Pflanzl, 2015	German	forward
34	Krammer, Sommer, & Arendasy, 2017	English	experts
35	Biderman et al., 2012	English	SIOP
36	Biderman & Nguyen, 2009	English	SIOP
37	Clark & Biderman, 2006	English	SIOP
38	Delgado, Tristan, Kung, & O'Connell, 2011	English	SIOP
39	Griffith et al., 2004	English	SIOP

Appendix A Table 1 (continued)

ID_{Study}	Author(s)	Language	Origin
40	Huang, Wells, & Nguyen, 2015	English	SIOP
41	Larson, Lewis, O'Neill, & Carswell, 2013	English	SIOP
42	Merlini, Sudduth, Ricci-Twitchell, Kung, & Griffith, 2010	English	SIOP
43	Wrensen & Biderman, 2005	English	SIOP
44	Burns, Fillipowski, Morris, & Shoda, 2015	English	experts
45	Lüscher Mathieu, 2009	German	experts
46	Arthur, Doverspike, Muñoz, Taylor, & Carr, 2014	English	backward
47	Bass, 1957	English	backward
48	Bott, O'Connell, Ramakrishnan, & Doverspike, 2007	English	backward
49	De Fruyt, Aluja, García, Rolland, & Jung, 2006	English	backward
50	de Meijer, Born, Terlouw, & van der Molen, 2008	English	backward
51	De Soete, Lievens, Oostrom, & Westerveld, 2013	English	backward
52	DuVernet, Wright, Meade, Coughlin, & Kantrowitz, 2014	English	backward
53	Fine, Goldenberg, & Noam, 2016	English	backward
54	Friborg, Barlaug, Martinussen, Rosenvinge, & Hjemdal, 2005	English	backward
55	Furnham, Forde, & Cotter, 1998	English	backward
56	Furnham, Taylor, & Chamorro-Premuzic, 2008	English	backward
57	Hale & Padgett, 2014	English	backward
58	Hausdorf & Risavy, 2015	English	backward
59	Heinsman, de Hoogh, Koopman, & van Muijen, 2007	English	backward
60	Hilliard, 2000	English	backward
61	Krajewski, Goffin, McCarthy, Rothstein, & Johnston, 2006	English	backward
62	Mersman & Shultz, 1998	English	backward
63	Mudgett, 2000	English	backward
64	O'Connell, Kung, & Tristan, 2011	English	backward
65	Robie, Taggar, & Brown, 2009	English	backward
66	Ryan, Ployhart, & Friedel, 1998	English	backward
67	Stricker, 1969	English	backward
68	van der Zee, Zaal, & Piekstra, 2003	English	backward
69	van Hooft & Born, 2012	English	backward
70	Witt, 2002	English	backward

Note. Only studies in German and English were included. forward = forward search, experts = sent by experts, backward = backward search.

Appendix A Table 2
Overview Samples

ID_{Sample}	ID_{Study}	Non-Selection Sample (yes / no)	Selection Sample (field / lab)	Type PT (ss / fc)	Type CA (n / v / m)	Participants	*N*
1	1	yes	field	ss	m	applicants	252
2	1	yes	-	ss	m	incumbents	44
3	1	yes	field	ss	m	applicants	318
4	2	no	field	ss	m	applicants	62
5	3	no	lab	ss	m	students	174
6	3	yes	-	ss	m	students	172
7	4	no	lab	ss	m	students	142
8	4	yes	-	ss	m	students	161
9	5	yes	lab	ss; fc	m	students	518
10	6	yes	lab	ss; fc	m	students	136 – 280
11	7	yes	-	ss	n; v; m	students	152
12	7	yes	lab	ss	n; v; m	students	159
13	8	no	lab	ss; fc	m	incumbents	114
14	9	yes	lab	ss	m	students	229
15	10	no	field	fc	n	applicants	56
16	10	no	field	fc	n	applicants	301
17	11	no	lab	ss	n	students	54
18	11	yes	-	ss	n	students	110
19	12	no	lab	ss	m	students	149
20	13	no	lab	ss	m	students	126
21	13	yes	-	ss	m	students	117
22	14	no	lab	ss	m	students	182
23	14	yes	-	ss	m	students	155
24	15	yes	lab	ss	m	incumbents	400 – 402
25	16	yes	-	ss	m	incumbents	1,606
26*	16	no	field	ss	m	applicants	26,197 – 69,909
27	17	yes	lab	ss	n; v; m	students	185
28	18	yes	-	ss	m	applicants	214
29*	18	no	field	ss	m	incumbents	20,880
30	18	yes	-	ss	m	applicants	493
31	18	no	field	ss	m	incumbents	3,735
32	18	yes	-	ss	m	applicants	247
33	18	no	field	ss	m	incumbents	2,964
34	19	yes	lab	ss	m	students	122
35	19	yes	lab	ss	m	students	121
36	19	yes	lab	ss	m	students	99
37	19	yes	lab	ss	m	students	164
38	20	yes	-	ss	m	students	80
39	20	no	lab	ss	m	students	74
40	20	yes	-	ss	m	students	66
41	20	no	lab	ss	m	students	61
42	21	yes	lab	ss	m	students	203

Appendix A Table 2 (continued)

ID_{Sample}	ID_{Study}	Non-Selection Sample (yes / no)	Selection Sample (field / lab)	Type PT (ss / fc)	Type CA (n / v / m)	Participants	*N*
43	22	yes	lab	ss	n	students	301
44	23	yes	lab	ss	m	students	370
45	24	no	field	ss	m	applicants	71
46	25	no	lab	ss	m	students	192
47	26	no	field	ss	n; v; m	applicants	382
48	27	yes	lab	ss	m	students	59
49	27	yes	lab	ss	m	students	41
50	27	yes	lab	ss	m	students	50
51	28	no	field	ss	m	applicants	76
52	29	yes	-	ss	m	students	81
53	29	yes	-	fc	m	students	84
54	29	no	lab	ss	m	students	81
55	29	no	lab	fc	m	students	83
56	30	no	field	ss	m	applicants	196
57	30	no	field	ss	m	applicants	170
58	30	no	lab	ss	m	students	62
59	30	no	lab	ss	m	students	62
60	31	no	field	ss	n	applicants	65
61	32	no	lab	ss	n; v; m	students	172
62	32	yes	-	ss	n; v; m	students	166 – 167
63	33	no	field; lab	ss	n	students	39
64	33	no	field; lab	ss	n	students	39
65	33	yes	field	ss	n	students	36
66	34	no	field; lab	ss	n	students	81
67	34	no	field; lab	ss	n	students	81
68	34	yes	field	ss	n	students	81
69	35	yes	-	ss	m	students	110
70	35	no	lab	ss	m	students	108
71	35	no	lab	ss	m	students	110
72	36	yes	lab	ss	m	students	202
73	37	yes	lab	ss	m	students	249
74*	38	no	field	ss	n	applicants	28,280
75	39	yes	field	ss	m	students	214 – 228
76	39	yes	field	ss	m	students	239
77*	40	no	field	ss	m	applicants	62,020
78	41	yes	-	ss; fc	m	students	86
79	41	no	lab	ss; fc	m	students	167
80	42	yes	field	ss	m	applicants	271
81	43	yes	lab	ss	m	students	166
82	44	yes	-	ss	n; v; m	students	57
83	44	no	lab	ss	n; v; m	students	100
84	44	no	lab	ss	n; v; m	students	100
85	44	no	lab	ss	n; v; m	students	100

Appendix A Table 2 (continued)

ID_{Sample}	ID_{Study}	Non-Selection Sample (yes / no)	Selection Sample (field / lab)	Type PT (ss / fc)	Type CA (n / v / m)	Participants	*N*
86	44	no	lab	ss	n; v; m	students	100
87	45	yes	lab	ss	m	students	187
88*	46	no	field	ss	n; v; m	applicants	2,006,239
89*	46	no	field	ss	n; v; m	applicants	36,550
90	47	no	field	ss	m	applicants	265
91	47	yes	-	ss	m	incumbents	471
92	48	yes	-	ss	n	incumbents	302
93	48	no	field	ss	n	applicants	5,629
94*	49	no	field	ss	n	applicants	19,365
95	50	no	field	ss	n; v; m	applicants	2,365
96	50	no	field	ss	n; v; m	applicants	682
97	51	no	field	ss	n; v; m	applicants	117 – 231
98	52	no	field	ss	m	applicants	6,127
99	52	no	lab	ss	m	others	1,303
100	53	no	field	ss	m	applicants	467
101	54	no	field	ss	n; v; m	applicants	363 – 365
102	55	no	field	ss	m	applicants	233
103	56	no	field	ss	n	applicants	108
104	57	yes	lab	ss	v	students	62
105	58	no	field	ss	m	applicants	159 – 168
106	59	no	field	ss	n; v; m	applicants	932
107	60	no	field	ss	m	applicants	100
108	61	no	field	ss	n; v; m	applicants	84
109	62	yes	lab	ss	m	students	314 – 322
110	63	yes	lab	ss	m	students	77
111	63	yes	lab	ss	m	students	194
112	64	yes	-	ss	n	incumbents	391
113	64	no	field	ss	n	applicants	2,028
114	65	no	lab	ss	m	students	329
115	66	no	field	ss	v	applicants	1,700
116	67	no	lab	ss	n; v; m	students	91
117	68	no	field	ss	n; v; m	applicants	176
118	69	yes	lab	ss	m	students	64
119	69	yes	lab	ss	m	students	65
120	70	no	field	ss	m	applicants	130
121	70	yes	-	ss	m	incumbents	195
122	70	yes	-	ss	m	incumbents	144

Note. ss = single stimulus, fc = forced choice, n = non-verbal cogntive ability test, v = verbal cogntive ability test, m = mixed cogntive ability test, *N* = number of participants in sample, * = sample (*N* > 10,000) was excluded from calculation to inhibit overemphasis of single study effect sizes. Total sampel size *N* = 2,289,508; Sample size after exclusion of excessively large single studys: *N* = 46,265.

References

Arthur, W., Doverspike, D., Muñoz, G. J., Taylor, J. E., & Carr, A. E. (2014). The use of mobile devices in high-stakes remotely delivered assessments and testing. *International Journal of Selection and Assessment*, *22*, 113–123. https://doi.org/10.1111/ijsa.12062

Arthur, W., Glaze, R. M., Villado, A. J., & Taylor, J. E. (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. https://doi.org/10.1111/j.1468-2389.2010.00476.x

Bangerter, A., Corvalan, P., & Cavin, C. (2014). Storytelling in the selection interview? How applicants respond to past behavior questions. *Journal of Business and Psychology*, *29*, 593–604. https://doi.org/10.1007/s10869-014-9350-0

Bass, B. M. (1957). Faking by sales applicants of a forced choice personality inventory. *Journal of Applied Psychology*, *41*, 403–404. https://doi.org/10.1037/h0044670

Biderman, M. D., & Nguyen, N. T. (2009). Measuring faking propensity. Presented at the 24th Annual Conference of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Biderman, M. D., Worthy, R., Nguyen, N. T., Mullins, B., Luna, J., & Mullins, T. (2012). Criterion-related validity of three personality questionnaires. Presented at the 27th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego, CA.

Bing, M. N., Kluemper, D., Davison, H. K., Taylor, S., & Novicevic, M. (2011). Overclaiming as a measure of faking. *Organizational Behavior and Human Decision Processes*, *116*, 148–162. https://doi.org/10.1016/j.obhdp.2011.05.006

Bing, M. N., Whanger, J. C., Davison, H. K., & VanHook, J. B. (2004). Incremental validity of the frame-of-reference effect in personality scale scores: A replication and

extension. *Journal of Applied Psychology*, *89*, 150–157. https://doi.org/10.1037/0021-9010.89.1.150

Bott, J. P., O'Connell, M. S., Ramakrishnan, M., & Doverspike, D. (2007). Practical limitations in making decisions regarding the distribution of applicant personality test scores based on incumbent data. *Journal of Business and Psychology*, *22*, 123–134. https://doi.org/10.1007/s10869-007-9053-x

Burns, G. N., Fillipowski, J. N., Morris, M. B., & Shoda, E. A. (2015). Impact of electronic warnings on online personality scores and test-taker reactions in an applicant simulation. *Computers in Human Behavior*, *48*, 163–172. https://doi.org/10.1016/j.chb.2015.01.051

Christiansen, N. D., Burns, G. N., & Montgomery, G. E. (2005). Reconsidering forced-choice item formats for applicant personality assessment. *Human Performance*, *18*, 267–307. https://doi.org/10.1207/s15327043hup1803_4

Clark, J. M., III., & Biderman, M. D. (2006). A structural equation model measuring faking propensity and faking ability. Presented at the 21st Annual Conference of the Society for Industrial and Organizational Psychology, Dallas, TX.

Converse, P. D., Oswald, F. L., Imus, A., Hedricks, C., Roy, R., & Butera, H. (2008). Comparing personality test formats and warnings: Effects on criterion-related validity and test-taker reactions. *International Journal of Selection and Assessment*, *16*, 155–169. https://doi.org/10.1111/j.1468-2389.2008.00420.x

De Fruyt, F., Aluja, A., García, L. F., Rolland, J.-P., & Jung, S. C. (2006). Positive presentation management and intelligence and the personality differentiation by intelligence hypothesis in job applicants. *International Journal of Selection and Assessment*, *14*, 101–112. https://doi.org/10.1111/j.1468-2389.2006.00337.x

de Meijer, L. A. L., Born, M. P., Terlouw, G., & van der Molen, H. T. (2008). Criterion-related validity of Dutch police-selection measures and differences between ethnic

groups. *International Journal of Selection and Assessment*, *16*, 321–332. https://doi.org/10.1111/j.1468-2389.2008.00438.x

De Soete, B., Lievens, F., Oostrom, J., & Westerveld, L. (2013). Alternative predictors for dealing with the diversity-validity dilemma in personnel selection: The constructed response multimedia test. *International Journal of Selection and Assessment*, *21*, 239–250. https://doi.org/10.1111/ijsa.12034

Delgado, K., Tristan, E., Kung, M., & O'Connell, M. (2011). Mean score and validity differences among bogus item endorsement groups. Presented at the 26th Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.

DuVernet, A. M., Wright, N. A., Meade, A. W., Coughlin, C., & Kantrowitz, T. M. (2014). General mental ability as a source of differential functioning in personality scales. *Organizational Research Methods*, *17*, 299–323. https://doi.org/10.1177/1094428114525996

Fine, S., Goldenberg, J., & Noam, Y. (2016). Integrity testing and the prediction of counterproductive behaviours in the military. *Journal of Occupational and Organizational Psychology*, *89*, 198–218. https://doi.org/10.1111/joop.12117

Friborg, O., Barlaug, D., Martinussen, M., Rosenvinge, J. H., & Hjemdal, O. (2005). Resilience in relation to personality and intelligence. *International Journal of Methods in Psychiatric Research*, *14*, 29–42. https://doi.org/10.1002/mpr.15

Furnham, A., Forde, L., & Cotter, T. (1998). Personality and intelligence. *Personality and Individual Differences*, *24*, 187–192. https://doi.org/10.1016/S0191-8869(97)00169-4

Furnham, A., Taylor, J., & Chamorro-Premuzic, T. (2008). Personality and intelligence correlates of assessment center exercises. *Individual Differences Research*, *6*, 181–192.

Gerber-Braun, B. (2010). *The double cross: Individual differences between respondents with different response sets and styles on questionnaires* (Doctoral dissertation). LMU

München: Fakultät für Psychologie und Pädagogik, München, Germany. Retrieved from http://nbn-resolving.de/urn:nbn:de:bvb:19-117951

Goffin, R. D., Jang, I., & Skinner, E. (2011). Forced-choice and conventional personality assessment: Each may have unique value in pre-employment testing. *Personality and Individual Differences*, *51*, 840–844. https://doi.org/10.1016/j.paid.2011.07.012

Griffith, R., English, A., Yoshita, Y., Gujar, A., Monnot, M., Malm, T., & Graseck, M. (2004). Individual differences and applicant faking behavior: One of these applicants is not like the other. In *N. D. Christiansen (Chair), Beyond Social Desirability in Research on Applicant Response Distortion. Symposium conducted at the 19th Annual Conference of the Society for Industrial and Organizational Psychology*. Chicago, IL.

Grubb, W. L., III., & McDaniel, M. A. (2007). The fakability of Bar-On's emotional quotient inventory short form: Catch me if you can. *Human Performance*, *20*, 43–59. https://doi.org/10.1207/s15327043hup2001_3

Hale, R. L., & Padgett, R. J. (2014). Take it but don't fake it: Using self-awareness to reduce fabrications on personality tests. Presented at the 26th Annual Convention of the Association for Psychological Science, San Francisco, CA.

Hausdorf, P. A., & Risavy, S. D. (2015). Predicting training and job performance for transit operators. *International Journal of Selection and Assessment*, *23*, 191–195. https://doi.org/10.1111/ijsa.12107

Hausknecht, J. P. (2010). Candidate persistence and personality test practice effects: Implications for staffing system management. *Personnel Psychology*, *63*, 299–324. https://doi.org/10.1111/j.1744-6570.2010.01171.x

Heinsman, H., de Hoogh, A. H. B., Koopman, P. L., & van Muijen, J. J. (2007). Competencies through the eyes of psychologists: A closer look at assessing competencies. *International Journal of Selection and Assessment*, *15*, 412–427. https://doi.org/10.1111/j.1468-2389.2007.00400.x

Hilliard, P. A. (2000). *Comparison of the predictive validity of a written test, an integrity test, a conscientiousness questionnaire, a structured behavioral interview and a personality inventory in the assessment of job applicants' background investigations, and subsequent task and contextual job performance* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3018089)

Huang, J., Wells, B. M., & Nguyen, D. (2015). Smart and slick: Relationships among cognitive ability, personality, and faking. Presented at the 30th Annual Conference of the Society for Industrial and Organizational Psychology, Philadelphia, PA.

Huws, N., Reddy, P. A., & Talcott, J. B. (2009). The effects of faking on non-cognitive predictors of academic performance in university students. *Learning and Individual Differences*, *19*, 476–480. https://doi.org/10.1016/j.lindif.2009.04.003

Klehe, U.-C., Kleinmann, M., Hartstein, T., Melchers, K. G., König, C. J., Heslin, P. A., & Lievens, F. (2012). Responding to personality tests in a selection context: The role of the ability to identify criteria and the ideal-employee factor. *Human Performance*, *25*, 273–302. https://doi.org/10.1080/08959285.2012.703733

Komar, S., Komar, J. A., Robie, C., & Taggar, S. (2010). Speeding personality measures to reduce faking: A self-regulatory model. *Journal of Personnel Psychology*, *9*, 126–137. https://doi.org/10.1027/1866-5888/a000016

Krajewski, H. T., Goffin, R. D., McCarthy, J. M., Rothstein, M. G., & 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. https://doi.org/10.1348/096317905X68790

Krammer, G., & Pflanzl, B. (2015). Faking von Persönlichkeitseigenschaften bei Zulassungsverfahren für Lehramtsstudien [Faking of personality traits during selection for teacher training programs]. *Zeitschrift für Pädagogische Psychologie*, *29*, 205–214. https://doi.org/10.1024/1010-0652/a000161

Krammer, G., Sommer, M., & Arendasy, M. E. (2017). The psychometric costs of applicants' faking: Examining measurement invariance and retest correlations across response conditions. *Journal of Personality Assessment*, *99*, 510–523. https://doi.org/10.1080/00223891.2017.1285781

Labrador, J. R. (2006). *Assessing applicant personality using low fidelity simulations* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3241606)

Lao, R. Y. (2001). *Faking in personality measures: Effects on the prediction of job performance* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3002950)

Larson, N., Lewis, R., O'Neill, T., & Carswell, J. (2013). Are forced choice personality measures contaminated by general mental ability? Presented at the 28th Annual Conference of the Society for Industrial and Organizational Psychology, Huston, TX.

Levashina, J., Weekley, J. A., Roulin, N., & Hauck, E. (2014). Using blatant extreme responding for detecting faking in high-stakes selection: Construct validity, relationship with general mental ability, and subgroup differences. *International Journal of Selection and Assessment*, *22*, 371–383. https://doi.org/10.1111/ijsa.12084

Lüscher Mathieu, P. (2009). *Persönlichkeitstests in der Personalauswahl: Führen Informationen zur Auswertung zu stärker verfälschtem Antwortverhalten? [Personality tests in personnel selection: Does information about evaluation cause more faking behavior?]* (Unpublished Lizenziatsarbeit). Philosophische Fakultät der Universität Zürich, Zürich, Switzerland.

MacCann, C. (2013). Instructed faking of the HEXACO reduces facet reliability and involves more Gc than Gf. *Personality and Individual Differences*, *55*, 828–833. https://doi.org/10.1016/j.paid.2013.07.007

MacKenzie, W. I., Ployhart, R. E., Weekley, J. A., & Ehlers, C. (2010). Contextual effects on SJT responses: An examination of construct validity and mean differences across applicant and incumbent contexts. *Human Performance*, *23*, 1–21. https://doi.org/10.1080/08959280903400143

Martin, N. R. (2011). *Influence of self-schema on applicant faking* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3449018)

Merlini, P., Sudduth, M. M., Ricci-Twitchell, M., Kung, M.-C., & Griffith, R. (2010). The smart or right choice: Exploring job-related intelligence and faking. Presented at the 25th Annual Conference of the Society for Industrial and Organizational Psychology, Atlanta, GA.

Mersman, J. L., & Shultz, K. S. (1998). Individual differences in the ability to fake on personality measures. *Personality and Individual Differences*, *24*, 217–227. https://doi.org/10.1016/S0191-8869(97)00160-8

Mudgett, B. O. (2000). *Individual and situational influences on distortion of personality tests* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 9969296)

Nguyen, D. (2012). *Examining the role of job familiarity, cognitive ability, and emotional intelligence in faking success for personality assessment* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database (UMI No. 3514363)

Nguyen, N. T., Biderman, M. D., & McDaniel, M. A. (2005). Effects of response instructions on faking a situational judgment test. *International Journal of Selection and Assessment*, *13*, 250–260. https://doi.org/10.1111/j.1468-2389.2005.00322.x

O'Connell, M. S., Kung, M.-C., & Tristan, E. (2011). Beyond impression management: Evaluating three measures of response distortion and their relationship to job performance. *International Journal of Selection and Assessment*, *19*, 340–351. https://doi.org/10.1111/j.1468-2389.2011.00563.x

Okanović, P., Okanović, D., Mitrović, D., & Majstorović, N. (2013). Academic integrity "captured" by a personality-based test. *Psihologija*, *46*, 61–75. https://doi.org/10.2298/PSI1301061O

Peterson, M. H., Griffith, R. L., & Converse, P. D. (2009). Examining the role of applicant faking in hiring decisions: Percentage of fakers hired and hiring discrepancies in single- and multiple-predictor selection. *Journal of Business and Psychology*, *24*, 373–386. https://doi.org/10.1007/s10869-009-9121-5

Preckel, D., & Schüpbach, H. (2005). Zusammenhänge zwischen rezeptiver Selbstdarstellungskompetenz und Leistung im Assessment Center [Correlations between receptive self-presentation competence and performance in an assessment center]. *Zeitschrift für Personalpsychologie*, *4*, 151–158. https://doi.org/10.1026/1617-6391.4.4.151

Robie, C., Komar, S., & Brown, D. J. (2010). The effects of coaching and speeding on Big Five and impression management scale scores. *Human Performance*, *23*, 446–467. https://doi.org/10.1080/08959285.2010.515278

Robie, C., Taggar, S., & Brown, D. J. (2009). The effects of warnings and speeding on scale scores and convergent validity of conscientiousness. *Human Performance*, *22*, 340–354. https://doi.org/10.1080/08959280903120287

Ryan, A. M., Ployhart, R. E., & Friedel, L. A. (1998). Using personality testing to reduce adverse impact: A cautionary note. *Journal of Applied Psychology*, *83*, 298–307. https://doi.org/10.1037/0021-9010.83.2.298

Schermer, J. A., Carswell, J., & Jackson, S. (2012). Correlations between a general factor of personality and employment measures. *Personality and Individual Differences*, *53*, 557–561. https://doi.org/10.1016/j.paid.2012.04.037

Stricker, L. J. (1969). "Test-wiseness" on personality scales. [Monograph]. *Journal of Applied Psychology*, *53*, 1–17. https://doi.org/10.1037/h0027380

Tett, R. P., Freund, K. A., Christiansen, N. D., Fox, K. E., & Coaster, J. (2012). Faking on self-report emotional intelligence and personality tests: Effects of faking opportunity, cognitive ability, and job type. *Personality and Individual Differences*, *52*, 195–201. https://doi.org/10.1016/j.paid.2011.10.017

Thumin, F. J. (1994). Correlations for a new personality test with age, education, intelligence, and the MMPI-2. *Perceptual and Motor Skills*, *79*, 1383–1389. https://doi.org/10.2466/pms.1994.79.3.1383

van der Zee, K. I., Zaal, J. N., & Piekstra, J. (2003). Validation of the multicultural personality questionnaire in the context of personnel selection. *European Journal of Personality*, *17*, S77–S100. https://doi.org/10.1002/per.483

van Hooft, E. A. J., & Born, M. P. (2012). Intentional response distortion on personality tests: Using eye-tracking to understand response processes when faking. *Journal of Applied Psychology*, *97*, 301–316. https://doi.org/10.1037/a0025711

Vasilopoulos, N. L., Cucina, J. M., Dyomina, N. V., Morewitz, C. L., & Reilly, R. R. (2006). Forced-choice personality tests: A measure of personality and cognitive ability? *Human Performance*, *19*, 175–199. https://doi.org/10.1207/s15327043hup1903_1

Vasilopoulos, N. L., Cucina, J. M., & McElreath, J. M. (2005). Do warnings of response verification moderate the relationship between personality and cognitive ability? *Journal of Applied Psychology*, *90*, 306–322. https://doi.org/10.1037/0021-9010.90.2.306

Witt, L. A. (2002). The interactive effects of extraversion and conscientiousness on performance. *Journal of Management*, *28*, 835–851. https://doi.org/10.1177/014920630202800607

Wrensen, L. B., & Biderman, M. D. (2005). Factors related to faking ability: A structural equation model application. Presented at the 20th Annual Conference of the Society for Industrial and Organizational Psychology, Los Angeles, CA.

Ziegeler, L. (2012). Faking von Persönlichkeitstests in der Praxis der Personalauswahl: Eine Vergleichsstudie [Faking of personality tests in the practice of personnel selection: A comparative study]. In J. R. Smettan, F. Schreiber, L. Olos, C. Riegel, & W. Grieshop (Eds.), *Erfolg durch Kompetenz: Best Practice in der Wirtschaftspsychologie. Kongressband zum 9. Kongress für Wirtschaftspsychologie, Potsdam, 18.-19. Mai 2012* (pp. 147–160). Berlin: Deutscher Psychologen Verlag.

Ziegler, M., & Buehner, M. (2009). Modeling socially desirable responding and its effects. *Educational and Psychological Measurement*, *69*, 548–565. https://doi.org/10.1177/0013164408324469

Appendix B

Supplement Material for Chapter V

Appendix B Table 1
Items of the Competitive Worldviews Scale Used in Sample 3

Item	Covered aspect
Die meisten Menschen...	
... sind der Meinung, dass der eigene Erfolg das einzige ist, das im Leben zählt.	DA
... denken, dass es wichtig ist Macht zu besitzen.	SDO
... nehmen Rücksicht auf andere Personen.	TM (-)
... denken, dass der Zweck alle Mittel rechtfertigt.	MA
... sind dazu bereit ohne Gegenleistung zu helfen.	TM (-)
... würden Regeln brechen, um erfolgreich zu sein.	MA
... halten einen Kompromiss für eine gute Lösung eines Streits.	DA (-)
... sind bereit andere Personen auszunutzen, um ihre Ziele zu erreichen.	MA

Note. The abbreviations in the second column indicate the aspect of competitive worldviews construct covered by this item: DA = Darwinistic Attitude, SDO = Social Dominance Orientation, TM = Tough Mindedness, MA = Machiavellianism. Items with reversed polarity are additionally marked with (-).