

BI Norwegian Business School – Thesis

Applicant Faking in Personality Measurements

The faking-resistance of ipsative and normative measurements in a selection process

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Abstract

Personality measurements are popular in selection processes; meaning applicant faking has arisen as a potential problem. There are two classifications for personality measurements: ipsative and normative. The latter creates concerns with applicant faking and the ease by which applicants could manipulate their scores. Recent research suggests ipsative measurements as a remedy to faking behavior and that ipsative measurements generate normative trait information. In the current research, good construct validity, and consistent scores across experimental manipulations support these findings on ipsative measurements. In addition, ipsative measurements show a higher potential to cope with applicant faking than normative measurements, as they were less inflated in a real selection process. However, it is difficult to clearly suggest ipsative measurements as the most prominent method when hiring employees, as the normative measurement were not largely inflated, even though it showed more weakness than the ipsative measurement. Interestingly, warnings given to applicants before conducting personality measurements showed signs of adjusting for faking behavior by lowering mean scores of the normative measurements more than for ipsative measurements. Results suggest that the ipsative format could be a method to address the problem, but warnings also show promising results.

Introduction

Personality measurements are widely used in recruitment processes, which has been an interesting topic for researchers (Smith & Ellingsen, 2002). Such inventories have been found to be good predictors for job performance and other important work-related behaviors (McFarland, Ryan, & Ellis, 2002; Smith & Ellingsen, 2002; Donovan, Dwight, & Hurtz, 2003; Rothstein & Goffin, 2006; Salgado & Tauriz, 2014), and are most often made out of Costa and McRae's (1992) Big Five personality traits measuring neuroticism/emotional stability, extroversion, openness, agreeableness and conscientiousness.

However, Murphy and Dzieweczynski (2005) underline that there is not unanimous agreement on the relevance of these screenings when hiring employees. They argue that there is low validity in testing broad personality traits and that recruitment professionals choose their inventories poorly. Hence, they see vague links between broad personality traits and specific jobs and posit that cognitive measures are more stable due to the stability of the tests across differences in occupations and environments.

Although broad personality traits are good at predicting overall job performance, a narrower construct like facets of personality traits is preferred to predict performance in complex tasks. To make the most of such measurements in selection processes, a report containing broad traits and underlying constructs should be used (Judge, Rodell, Klinger, Simon, & Crawford, 2013). Judge and Zapata (2015) find that when using the Big Five personality traits to predict job performance, there are situations that activate specific traits and other situations where specific traits are not easily spotted. An example of specific trait activation could be that scoring high on openness is helpful in an innovative environment, while scoring high on agreeableness is not an advantage in a competitive environment. Through these studies, Judge et al. (2013), and Judge and Zapata (2015) highlight the importance of personality traits in selection.

The widespread use of measurements has raised questions about how susceptible they are to faking behavior (Viswesvaran & Ones, 1999). Applicants are able to influence their scores on personality measurements (Rosse, Stecher, Miller, & Levin, 1998), and research shows that many do engage in such behaviors (Donovan et al., 2003). Further, Hogan, Barrett, and Hogan (2007) find that faking is not a significant problem when it comes to real selection processes,

while other researchers obtain mixed results and that there is too little evidence indicating that faking is *not* a challenge when conducting personality measurements on applicants (Dingguo, Carroll, Lopez, Tian, & Hui, 2012). However, there are concerns regarding applicant faking and their effects on rank orders of individuals (McCloy & Reeve, 2005; Dilchert, Ones, Viswesvaran, & Deller, 2006) and further, the validity of the measurements themselves (Mueller-Hanson, Heggstad, & Thronton, 2003; Heggstad, Morrison, Reeve, & McCloy, 2006). Personality measurements and faking-resistance will be addressed in this thesis through the research question:

Will ipsative measurements be more faking-resistant than normative measurements?

Normative and ipsative measurements are included in this research, as these are the main traditions used in gathering personality data, making it thereby important to present (Bowen, Martin, & Hunt, 2002). Further, research is conducted in the admission process of the Officer Candidate School in the Norwegian army. To examine faking and responses on personality measurements in a real-life setting, applicants are divided into three conditions to determine how experimental manipulations moderate faking behavior. Condition 1 (control), was informed that the test scores were part of a research project only. Condition 2 (selection), was told that test scores would be included in admissions evaluations. Condition 3 (warning), was given the same instructions as condition 2, but also warned that a lie scale would detect faking behavior. All applicants completed a normative measurement, NEO-Five Factor Inventory (NEO-FFI), using the same instructions for all experimental conditions, and an ipsative and normative design from the International Personality Item Pool (IPIP-Likert and IPIP-MFC) in compliance with conditions mentioned.

Faking-resistance of personality measurements will be examined in three ways to answer the research question. First, by examine possible change in correlations between NEO-FFI, IPIP-Likert, and IPIP-MFC across experimental conditions. Second, by examine possible change in mean scores across experimental conditions. Third, by examine possible change in predictability of IPIP-Likert and IPIP-MFC across experimental conditions. This is three ways to

detect if faking occurs, and which of the measurements being the most faking-resistant. The theoretical foundation will follow this build-up before research and method will be more thoroughly explained.

Theoretical Background

Design of Personality Measurements

Normative measurements. Having applicants answer statements on a scale in which preferences are indicated on a continuum with personality traits in both ends is a normative personality measurement. Further, the original scale is designed by Likert, and ranges from 1 to 5 (Boone & Boone, 2012). In normative measurement, the individual is used as a standard by which to compare results. This works as normative measurements have a representing norm group that has completed the measurement with results to which a possible applicant can be compared (Cattell, 1944). Hence, it is possible to rank order individuals on the personality traits tested. With this type of measurement, socially desirable responding is easier than in ipsative measurements (Vasilopoulos, Cucina, Dyomina, & Morewitz, 2006). For instance, if one applies for a position as a sales representative, and the position require being around people. Thus, a statement could read, "I like to be around people", rendering it simple to answer in a socially desirable manner and to impress the recruiter. If the mean score is moved because of faking, it might create a possible problem in the rank ordering of applicants (Bowen et al., 2002). Thereby, dishonest information is influencing the ranking and causing the mean scores to be wrong. Rosse et al. (1998) finds this to be a problem when only a few extreme fakers distort their scores, while the problem might not occur if all applicants dissemble. In addition, for this thesis normative measurements are represented by the mentioned NEO-FFI and IPIP-Likert conducted by the applicants.

Normative measurement is rank ordering individuals on the traits, and within the area of personality measurements, a major discussion is the effect on the rank ordering of applicants. There are a number of concerns, especially if faking brings in the wrong applicant for the job (McCloy et al., 2005; Dilchert et al., 2006). If a personality measurement has great influence on the rank ordering of applicants, it could also have a significant influence on who is selected for the

position, hence, influencing important decisions (Dilchert et al., 2006). Moreover, because of others' motivation to manage their scores, some applicants might become a victim of faking behavior. Faking is only a problem if it affects the outcome (Donovan et al., 2003; Winkelsprecht, Lewis, & Thomas, 2006). McCloy et al. (2005) find that the problem with faking and rank ordering of applicants is of particular concern in the upper tail of the scores. Although Hogan et al. (2007) do not find this to be a significant problem, Dingguo et al. (2012) argues that mixed results indicate that faking does not necessarily affect rank order. The problem of rank ordering is one of the main differences between normative and ipsative measurements. Moreover, it is important to distinguish between ipsative and normative as two different methods that measure the same constructs.

Ipsative measurements. Concerns about faking led to the development of the ipsative format for performing personality measurements. Ipsative measurements are designed to cope with faking and to make socially desirable responding more difficult (Bowen et al., 2002). Further, these tools create a rank ordering of personality traits within a particular individual, and not a rank ordering of how applicants score on each personality trait (Cattell, 1944). As ipsative measurements show the strongest and weakest traits within an individual on each item, one does not know the exact scores for each trait. Hence, it is not possible to have a rank order of applicants, but neither is it possible to answer desirably on all traits. This is one of the main criticisms of such tests, as you cannot compare individuals directly. Nevertheless, by having a large number of scales in the questionnaire it is possible to compensate for this drawback (Bowen et al., 2002). In addition, by examining research and job analysis, organizations should have an opinion about what kind of candidate they desire without rank ordering the applicants on personality traits measured (Fisher, Schoenfeldt, & Shaw, 2003).

However, there is a difference between a fully ipsative and a partially ipsative measurement. In a fully ipsative measurement, one distributes a fixed score across a set of constructs, while in a partially ipsative measurement one does not order the items completely (Hicks, 1970). The latter is the design used for this thesis and what it is referred to when mentioning ipsative measurements, and represented by the mentioned IPIP-MFC. This is an important difference, as fully

ipsative scores cannot give normative trait information (Hicks, 1970), while there have been suggestions to how this could be done with partially ipsative scores (Coombs, 1964, in Heggstad et al., 2006).

A multiple forced-choice item (MFC) is a type of partially ipsative measurement that contains two or more statements and requires applicants to choose between them. The applicant then chooses the response that most closely or least resembles him or herself, to generate a personality profile. Thereby, the applicant cannot score and look favorable on all statements (Heggstad et al., 2006), and ipsative measurements could shield better against faking (Bowen et al., 2002; Salgado, Anderson, & Tauriz, 2015). Hence, the criticism that ipsative measurements do not rank order the applicants might also be its strength, since the focus will change to the traits measured, and not how the person scores compared to others. However, even though a balanced forced-choice test makes it impossible to receive the maximum score on two scales (Meade, 2004), they have not been shown to uniformly defend against the applicant faking (Heggstad et al., 2006).

Two measures of the same construct. Even though forced-choice measurements are falsifiable, they have been shown to be a better indicator of personality and less related to social desirability when responding for an actual job (Christiansen, Burns, & Montgomery, 2005). Ipsative measurements are less susceptible to faking (Jackson, Wroblewski, & Ashton, 2000; Salgado et al., 2015), and with a balanced forced-choice measurement, it is impossible for the respondents to generate the maximum scores for two items in the same item set (Meade, 2004). However, criticisms of both construct and criterion-related validity are presented (Meade, 2004; McCloy et al., 2005). Nevertheless, Heggstad et al. (2006) finds good construct validity between normative and ipsative measurements in both honest and faking conditions, which are a necessary foundation as it indicates the measurements to measure similar constructs. In addition, it indicates that the multiple forced-choice measurements consist of normative trait information.

Despite the criticisms, companies use forced-choice measurements, highlighting the importance of more research. One needs better understanding of how these measurements operate in different conditions and how they deal with

faking in an actual selection process, where the applicants actually want the job, and not in an artificial laboratory setting. Further, Bradley and Hauenstein (2006) finds that most research is done in unnatural settings with groups labeled as “honest” and “faking” to examine faking behavior.

To indicate if the measurements measure the same constructs and have good construct validity, correlation analysis will be used. Same-trait correlations should be high and positive in all of the experimental conditions to support the expectations of measuring the same traits with various items and format. In addition, notifying if the relationships stay the same across experimental conditions, to observe if faking behavior potentially occurs. Based on previous discussions and research, the following hypotheses are offered:

Hypothesis 1a: There are positive and high correlations between same-traits in the IPIP-Likert and IPIP-MFC, and consistent correlations across all experimental conditions.

Hypothesis 1b: There are positive and high correlations between same-traits in the NEO-FFI and both IPIP measurements, but these are highest between the NEO-FFI and IPIP-Likert.

Applicant Faking

To understand the concept of faking and how it might occur, it is helpful to divide the term into *faking good* and *faking bad*. *Faking good* is when the applicants tries to create a better impression, and *faking bad* happens when the applicants fostering a negative impression concerning specific personality traits (Jackson et al., 2000). Hence, impression management, socially desirable responding, and other ways to achieve a different result on personality measurements is considered faking. There is agreement in the research that applicants can and do fake their scores (Rossie et al., 1998; McFarland et al., 2002; Donovan et al., 2003; Robie, Brown, & Beaty, 2007), but there are individual differences in the ability to do so (Dilchert et al., 2006). This difference in ability will affect the occurrence of faking on personality measurements, but some might also fake unconsciously and actually have an inaccurate self-image. This highlights the difficulty of handling

faking when done with intention and acknowledges that faking in an unconscious state is possible. The difference lies in how adept the applicants are at faking and impression management (Winkelsprecht et al., 2006).

When faking good, the applicant wants to put him or herself in an ideal position for what is desirable: in this case, a job opportunity. Individuals are able to change their responses and positioning of their traits when faking good (Viswesvaran & Ones, 1999). In other words, applicants are able to do impression management on desired traits and make their personality look more favorable by lying. The applicants have a choice between answering accurately or by what is desirable (McFarland et al., 2002). Viswesvaran and Ones (1999) finds that personality measurements are more susceptible to faking bad than faking good. It is then interesting that the literature almost without exception is interested in faking good (Dingguo et al., 2012) and that faking bad has not been examined more thoroughly.

Faking bad involves presenting a negative impression on specific traits or overall on the measurement given (Jackson et al., 2000). An applicant may think it is helpful to leave a negative impression on undesired traits, likely to generate a desirable response. Instead of faking by looking good on desired traits, looking bad on undesired traits might yield the same result. Traits or scales that are perceived to be important to job performance are more vulnerable to faking than others (Khorramdel, Kubinger, & Uitz, 2014).

How can faking behavior occur? One need to look at what motivates an applicant to understand why applicant faking occurs and why it might be perceived as beneficial. McFarland et al. (2002) find that applicants want to make a good impression when it will increase the likelihood of desired outcomes. When applying for a position and undergoing a personality measurement, the desired outcome is generally to be hired.

People who score highest on desired traits could be more likely to be selected, but also be in a position where they do not actually possess those traits (Rosse et al., 1998; Mueller-Hanson et al., 2003). Hence, faking could create problems due to the aforementioned rank ordering of applicants. The recruitment process in that case is just the beginning, and by hiring the wrong person, it will

influence further development in the position and the organization (Schmidt & Hunter, 1998).

Dilchert et al. (2006) highlight that applicants differ in their abilities to fake scores on personality measurements. Further, Pauls and Crost (2005) finds a positive relationship between cognitive ability and faking, where people with high ability are better to recognize the job requirements and the possible personality profile desired by an employer. For example, a study from 2012 finds applicant faking to be 20% greater when cognitive ability is above average, which is a reason to consider cognitive ability when coping with faking (Tett, Freund, Christiansen, Fox, & Coaster, 2012). Moreover, research suggests that forced-choice measurements are more cognitively demanding to fake than normative measurements (Christiansen et al., 2005; Vasilopoulos et al., 2006), which may be a reason for their higher resistance to faking.

Moreover, Mahar, Coburn, Griffin, Hemeter, Potappel, and Turton (2006) suggest that one strategy for faking can be stereotyping. The applicants will then answer according to the stereotype of the people working in the organization, but without negative aspects. In other words, they will try to be the perfect version of the stereotypes. Other ways to determine desired traits could be by talking to people and doing research before applying. These aspects could be influencing the traits applicants look for when wanting acceptance into the school in this research.

However, in recruitment processes a number of factors are normally taken into account. Interviews and case solving have a large impact on whom is chosen, and the effects of faking could then be minimized by using several sources of information to increase the validity of the process (Schmidt & Hunter, 1998). There are mixed results regarding how much faking impacts the validity of personality testing. While Donovan et al. (2003) reports that the validity and quality of the recruitment process is not debilitated to a high degree from potential faking, Winkelsprecht et al. (2006) on the other hand are more concerned about the consequences in an actual selection process.

Ipsative measurements are found to provide more accurate results than normative measurements when applicants are motivated to fake (Bowen et al., 2002). Further, ipsative measurements have been shown to shield a bit better against faking than normative measurements (Bowen et al., 2002; Christiansen et al., 2005; Heggstad et al., 2006; Bartram, 2007; Salgado et al., 2015) and as

being less related to socially desirable responding when applying for a real job (Christiansen et al., 2005). Research in faking is normally done by varying instruction sets to analyze how different conditions affect applicant responding (Bradley & Hauenstein, 2006). Such research has revealed significant differences between comparing groups when testing for faking using different instructional sets to observe changing mean scores on personality traits (McFarland & Ryan, 2000; Pauls & Croost, 2005; Heggstad et al., 2006). In the current study, the conditions are ones in which applicants naturally want to be accepted, potentially generating a motivation to fake. As ipsative measurements are expected to be more faking resistant than normative ones, and it is expected that conditions are significantly different from each other, the following hypotheses are presented:

Hypothesis 2a: Mean scores of all traits in the IPIP-Likert and IPIP-MFC increase in the selection condition compared to the control condition, and there is a significant difference between the groups.

Hypothesis 2b: IPIP-MFC is less inflated by the selection condition than IPIP-Likert.

Coping with faking. Attempts are made to defend against faking, and many measurements have compensations for faking that improve their validity (Goffin & Christiansen, 2003). Rosse et al. (1998) finds that neither validity nor rank order is affected if all applicants manage their scores, but the extreme fakers could achieve an effect if only a few individuals choose to fake.

When personality measurements are widely used and poorly chosen, the link between job and personality will be inaccurate (Murphy & Dzieweczynski, 2005). To know more about the effects of faking, and the underlying patterns of this behavior, measurement of personality could be leveraged to a higher degree in selection processes (Goffin & Boyd, 2009). Hence, coping with faking might not generate the wanted effects if the organization does not have the obligatory skills to perform a personality measurement in the first place. One has to start with establishing a professional recruitment process with the skills and knowledge necessary to handle the information gathered. The accuracy of hiring the best

possible person lies primarily in the process used by the organization (Murphy & Dzieweczynski, 2005).

First, faking can be addressed by using several methods in the recruitment process to increase validity and by having multiple sources to provide valuable information (Schmidt & Hunter, 1998). The increased validity gained by adding more sources of information makes it easier to be sure that the right applicant is picked for the job. An example of this could be that the recruiters use the job interview to talk through test scores, noting if applicant descriptions are in line with the answers given on the personality measurement. Relying on just one source of information is not preferable, as this may be inaccurate and will not cover the depth of the applicant's personality or other abilities in the applied position (Schmidt & Hunter, 1998).

Second, one can ask questions in a random order so that the applicant cannot be certain which trait is being measured. One could also ask the same question with other words to see if the answers change (Converse, Oswald, Imus, Hedricks, Roy, & Butera, 2006).

Third, a possible way to cope with faking is to insert a warning saying the test will detect if faking occurs. This shows, according to Dwight and Donovan (2003), and Rothstein and Goffin (2006), to yield positive results, possibly because the applicants are afraid of being caught faking their scores. Hence, this could also generate an unwanted effect. If the applicants are afraid of being caught faking, someone might make himself or herself look worse in order to be secure and perhaps not be hired even though they would have been offered the job. To deal with faking in such ways demands a thorough process in which the organization determines its stance on positive and negative effects related to coping strategies.

Previous research has showed ipsative measurements to defend better against faking than normative measurements, but these are still not completely resistant (Christiansen et al., 2005; Heggstad et al., 2006; Salgado et al., 2015). Furthermore, warnings have shown to have some effect on faking behavior by deterring people from distorting their scores (Dwight and Donovan, 2003; Converse et al., 2006; Rothstein & Goffin, 2006). Further, situational contexts have been found to have an effect on the occurrence of faking and mean scores

(Heggestad et al., 2006; Salgado et al., 2015). Based on the preceding discussions, the following hypotheses is presented:

Hypothesis 3a: Mean scores of traits on the IPIP-Likert and IPIP-MFC are lower in the warning condition than in the selection condition, and are shown to be significantly different from each other.

Hypothesis 3b: IPIP-MFC is less inflated by the warning condition than the IPIP-Likert.

Content and Predictability of Personality Measurements

When connecting personality traits to applicant faking, much depends on the position sought. Different jobs demand different personality profiles; hence, for applicants to make themselves look better by faking, they also need to identify traits that are most desirable for a certain job. To know about these personality traits, their connection to job performance, and which of them are typically desired for specific jobs might be information that those with the best ability to fake can exploit (Pauls & Crost, 2005).

Some traits are important in all occupations and are better at predicting job performance. Schmidt and Hunter (1998) find conscientiousness and integrity, together with cognitive abilities, to be good predictors for job performance. Integrity is proposed as being measured through neuroticism/emotional stability and agreeableness from Costa and McRae's (1992) Big Five model. Hence, it is natural to believe that the mentioned traits are especially important to monitor when examining applicants and their personality scores. These are good predictors for future job performance, and therefore a possible target for a faker in the recruitment process. Further, emotional stability is also a valid predictor for most occupations because employers want people with a stable mindset. Moreover, extroversion and agreeableness are important in jobs that demand interpersonal factors for success. However, desired personality traits always depend upon the type of job and kind of organization being applied for (Salgado, 1997).

Further, data gathered is drawn from admission to a military leadership school, including practical experiences within the field. Judge, Bono, Ilies, and

Gerhardt (2002) recognize extroversion, conscientiousness, openness, and emotional stability as correlating with leadership, which also Salgado et al. (2015) finds to relate with managerial and military job positions. Supplementary, Salgado et al. (2015) finds multidimensional forced-choice measurements to be a better predictor of future job performance than normative measurements, and further to be the recommended measurement in a selection process. Fully ipsative measurements is not shown to be a better indicator than normative measurements, but this changed when looking at partially ipsative measurements (Salgado et al., 2015). Bartram (2007) also finds multiple forced-choice to be a better predictor than using rater scales, which is done when conducting a Likert-type normative measurement. In addition, multiple forced-choice measurements have better predictive validity in selection processes. Based on partially ipsative measurements designed to cope with faking, and signs of their better predictive validity compared to normative measurements, the following hypothesis is presented:

Hypothesis 4: IPIP-MFC predicts admission to the Officer Candidate School better than IPIP-Likert in the selection condition, and IPIP-MFC predicts more consistent than IPIP-Likert across all conditions.

Method

This thesis is a project with data and research design from my supervisor Øyvind Martinsen. Data has been gathered from 1123 military applicants who have applied for Officer Candidate School, and the applicants were randomly selected for three different experimental conditions. The received raw data have been recoded and organized for analysis, and consists of descriptive statistics, measurements of personality, cognitive ability, interviews, evaluations of leadership potential, and whether participants were offered/denied entry into the school. Officer Candidate School is part of the leadership education in the Norwegian army, as well as the first step for those following the path of a future carrier as a military leader. Even though it is a school, it could also be seen as a job. The education is paid for, and divided into a two-year program, where the first year consists of both practical and theoretical education, and the second year involves functioning as a sergeant in the army.

Rather than using the term neuroticism, emotional stability will be the preferred term when reporting results from the analyses. The trait is measured on a scale ranging from neuroticism to emotional stability, and which term to use is decided by the direction of the items (Costa & McCrae, 1992). The scales of neuroticism are recoded and reversed for both IPIP measures, meaning the level of emotional stability is measured rather than the degree of neuroticism. This is not done in the NEO-FFI, where the scale is ordered, as it was when applicants completed the test. However, the term emotional stability will be used to avoid misunderstandings.

For some of the analyses, it is necessary to use mean scores and standard deviations of the multiple forced-choice measurement. This can be problematic, as Saville and Wilison (1991), and Baron (1996) finds that ipsative measurements do not meet the requirements for such analysis. However, the measurement of mean and standard deviation could be used if it provides useful information. For this purpose, mean scores and standard deviations were used to detect faking behavior and test for faking resistance, compared with the normative measurement. Moreover, research including mean scores of ipsative measurements has previously been conducted by Heggstad et al. (2006), and Salgado et al. (2015). Heggstad et al. (2006) is an especially relevant study as it created the foundation for the design and method used in this master thesis. In sum, it is appropriate to conduct analyses of ipsative measurements using mean scores and standard deviations.

There are ethical implications of measuring personality, especially for experimental purposes. Validity and reliability are always important aspects when testing for personality, and it could be argued as being unethical to use such measurements without meeting these standards (Messick, 1980). However, both validity and reliability will be addressed. It is also important to mention ethical implications considering how data was collected. To gather data, applicants in the selection condition and the warning condition were told that their scores would be part of the evaluation for admissions. Immediately after the measurements were conducted, the applicants were told they answered for research purposes. The ethical issue here is whether it is right or wrong to trick people in order to gather real-life data. This discussion took place between a chief psychologist in the army and Øyvind Martinsen before all measurements were conducted. One can say that

the applicants were deceived, but only for a short matter of time. Further, considering the importance of real-life data on personality measurements and faking, there was a purpose in misleading. Moreover, the high competence in designing and performing the measurements, in addition to the absence of violations of legal standards, confirm this as an ethical project (Eyde & Quaintance, 1988).

Sample

The data set includes 1123 participants in total, with ages ranging from 18 to 33 years old and an average age of 19. There was no information about sex or the distribution of men and women. However, as of 2014, only 20% of the students in the Officer Candidate School were women (Forsvaret, 2016). Data was gathered in 2013; hence, it is reasonable to believe that the majority were men.

Instruments

NEO-FFI. The 60-item NEO-FFI (Costa and McCrae, 1992) provides information about the Big Five personality traits, and was used as a “standard” for the applicants’ scores on each trait when gathering data. Applicants answered all statements on a 1 (strongly disagree) to 5 (strongly agree) Likert-scale (Appendix B). However, after recoding and reversing questions, the scale ranges from 0 to 4. All traits are measured from left to right with the exception of neuroticism, which goes the opposite direction. This is because scoring to not be neurotic will be a low mean score, while scoring as extroverted or any other trait will be a high mean score. Scores on all personality traits had a Cronbach’s alpha above .7, confirming the reliability of the test.

IPIP-MFC. As in Heggstad et al. (2006), there is an 18-item MFC measure from IPIP using a dichotomous method (Dunnette, McCartney, Carlson, & Krichner, 1962; in Heggstad et al., 2006), and provides information of the Big Five personality traits. This means that each item consists of four statements, two of which are socially desirable and the other two are undesirable. Applicants further choose two of the statements, one “most like me,” and one “least like me” for each item. All participants had to answer an item before moving on to the next,

to exclude the possibility of planning answers by knowing all of the statements. Giving a value to all four statements in relation to the answers given did the scoring. For statements indicating high trait standing, two points were given for the response “most like me”, and zero points for the response “least like me”. This was done in the opposite direction for statements indicating low trait standing. Two points were given for statements chosen as “least like me”, and zero points for choosing “most like me”. In addition, all statements not chosen were given one point, making it possible to earn two, four, or six points on each item (Appendix B).

Table 1.

Example of a Multidimensional Forced-Choice (MFC) Item and Responses from Two Hypothetical Respondents

MFC Item	Person A		Person B	
	Responses	Scale Score	Responses	Scale Score
Criticize others' shortcomings (A-)		1	Least	2
Put little time and effort into my work (C-)	Most	0		1
Am able to find out things by myself (O+)		1	Most	2
Am not easily frustrated (ES+)	Least	0		1
Item total		2		6

Note. A minus sign indicates that it is a low trait standing. A plus sign indicates that it is a high trait standing. The letters represent the Big Five personality traits: A = Agreeableness; C = Conscientiousness; O = Openness; ES = Emotional Stability. Most = Most like me. Least = Least like me.

Table 1 presents both ends of the continuum in gaining the least and largest amount of points possible within an item. Person A obtained the least amount of points possible by answering an undesired trait as “most like me”, while answering a desired trait as “least like me”. Compared to person B who did the exact opposite, it is clear how the scoring system works and how it is affected by different answers. Cronbach’s alpha is not an applicable test of reliability for an ipsative measurement because of the items is not independent. Heggstad et al.

(2006) examined test-retest reliability for this measurement, confirming its reliability with the same method used in this thesis.

IPIP-Likert. The MFC items were transformed and administered into IPIP-Likert scales, and an additional 53 items were added from IPIP in order to hide that the participants were answering the same questions. The measurement consists of 125 statements in total with scaling from 1 (very untrue of me) to 6 (very true of me), with 25 statements representing each personality trait of the Big Five model. Analyses were conducted based on only 72 items, similar to the items for IPIP-MFC (Appendix B). Cronbach's alpha for IPIP-Likert is above the necessary level of .7.

Procedure

The selection process for the Officer Candidate School in the Norwegian army occurs once a year. The first step is the same as for those doing mandatory military service, a day with various tests and health evaluations. In addition, those who want to attend the Officer Candidate School have to actively apply.

The NEO-FFI was administered first, with instructions that the responses would be part of a research project, the same for all applicants in all experimental conditions. The applicants were then introduced to both IPIP measures, but with various experimental instructions. The IPIP measures were given in a different order for half of the applicants to counterbalance the measurements and exclude the chance that order would affect the results. One half was answering the IPIP-Likert first, and the other half completed the IPIP-MFC first. Experimental conditions are separated into the control condition, selection condition, and warning condition. Further, data was collected on answering the tests as honestly as possible, with and without any motivation to fake.

McFarland and Ryan (2000), Bowen et al. (2002), Pauls and Croost (2005), Heggstad et al. (2006), and Vecchione, Dentale, Alessandri, and Barbaranelli (2014) have all conducted research on personality and faking by dividing participants into groups with different instructions, as in this study. This way of examining faking is therefore well established and builds on previous research by utilizing part of an actual selection process. Heggstad et al. (2006) in

particular is comparable as the same research design and personality measurement tools are used in laboratory settings.

Experimental Condition 1: Control. This group contains 372 applicants, instructed that their answers in the following measurements were for research purposes only. The purpose of this condition is to provide a control group to use when analyzing the effects between the other conditions. It will also provide information about measurement scores when motivation to fake is minimal. Participants were administered all mentioned personality measurements, starting with the NEO-FFI and followed by the IPIP-Likert and IPIP-MFC, answered in various orders.

The purpose of this condition is to examine if the IPIP-MFC provides normative trait information when motivation to fake scores is minimal. First, response format should not be a problem if the measurements measure the same traits. Second, as they are measuring the same traits, both IPIP measures should have a similar relationship to the NEO-FFI. Third, variations of the relationship between the measurements when comparing all conditions could explain potential faking behavior.

Experimental Condition 2: Selection. This group consists of 378 applicants, instructed that their answers were part of the admissions process for the Officer Candidate School and to answer as honestly as possible. The purpose of this condition is to gather data in a natural context where the applicants have applied of their own free will. Further, Experimental Condition 2 provides valuable information seen in relation to the other conditions. Hence, the participants in this condition might be motivated to fake their scores. Experimental Condition 2 distinguishes itself from other research by using part of a real-life selection process instead of constructed laboratory settings.

Experimental Condition 3: Warning. The third group consists of 373 applicants, instructed that their answers were part of the admissions process for the Officer Candidate School and asked to answer as honestly as possible, but with a warning that a lie scale will detect possible faking. The purpose of this condition is to gather data in a natural context when applicants are given a warning intended to discourage possible faking behavior. Moreover, it provides

valuable information about response patterns and faking resistance, in comparison to the other experimental conditions.

Results

Hypothesis 1a: There are positive and high correlations between same-traits in the IPIP-Likert and IPIP-MFC, and consistent correlations across all experimental conditions

Hypothesis 1a considers same-trait correlations between the IPIP-measurements. Estimates of correlation coefficients of same-traits covering all experimental conditions were conducted. In addition, estimates of correlation coefficients within each experimental condition were also done. Correlation coefficients vary from -1 to +1, where +/- .0 to .2 is considered low, +/- .2 to .5 is considered medium, and +/- .5 to 1 is considered high. Since the hypothesis is stating high and positive correlations, numbers being close to, or above .5 in the positive direction are desirable. In addition, in order to trust the correlations, they need to be significant. Significance is indicated by p values and ranges from .000 to 1. A score less than .05 is sufficient to classify a result as significant (Field, 2013). Significance level will be important in several of the upcoming analyses as well.

Results for Hypothesis 1a are presented in Tables 2, 3, 4, and 5. All same-trait correlations are significant at the $p = .01$ level. Same-trait correlations are high or close to high and positive for all traits, meaning all traits were correlating above .5, except for agreeableness correlating between .4 and .5 for all experimental conditions. In addition, openness has a correlation of .416 in the selection condition, and emotional stability has a correlation value of .479 in the warning condition. The correlation coefficients are consistent across experimental instructions. Even though some of the personality traits drop below the desired score of .5, they are close to this level and consistent across instruction sets, meaning that hypothesis 1a is supported.

Hypothesis 1b: There are positive and a high correlation between same-traits in the NEO-FFI and of both IPIP measures, but these are highest between the NEO-FFI and IPIP-Likert

Hypothesis 1b considers same-trait correlations between NEO-FFI and both of the IPIP-measures. The same analyses were conducted as in Hypothesis 1a with the same scoring levels being desired. Results are reported in Tables 2, 3, 4, and 5.

The correlations are higher and more positive between the NEO-FFI and IPIP-Likert, with all same-trait correlations being above .5. However, the same-trait correlation for emotional stability between the NEO-FFI and IPIP-Likert is negative, which accounts for a large negative correlation. However, in this case the negative sign appears because the scores of NEO-FFI are based on a scale of neuroticism, while both IPIP measures are reversed into a scale of emotional stability, hence, accounted for as a positive and high correlation. There are expected large and positive correlations between NEO-FFI and IPIP-MFC scores. However, only the correlation for conscientiousness met this prediction in all tables, while openness also met it in the warning condition, with the other traits correlating at values between .2 and .5. Even though the correlation between the NEO-FFI and IPIP-Likert was higher than the NEO-FFI and IPIP-MFC, they are a bit low compared to the desired level between the NEO-FFI and IPIP-MFC. Overall, there is partially support for hypothesis 1b.

However, even though the statistical values were not sufficient to fully support both hypotheses 1b, it is important to notice that the numbers are stable across experimental instructions, generating a trustworthy foundation for future analyses.

Table 2: Correlation Matrix with Correlation Coefficients, Chronbachs Alpha, Means and Standard Deviation for NEO-FFI, IPIP-Likert, and IPIP MFC covering all experimental conditions.

Measures	M	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NEO-FFI																	
1. N	1.1369	53004	.808														
2. E	2.9643	43796	-.314**	.779													
3. O	2.4442	50277	-.025	.180**	.758												
4. A	2.7596	44930	-.230**	.257**	.041	.710											
5. C	2.9902	46402	-.410**	-.413**	.080**	.318**	.825										
IPIP-Likert																	
6. ES	4.5173	47692	-.606**	.192**	.072*	.165**	.264**	.774									
7. E	4.0994	55931	-.360**	.635**	.240**	.090**	.346**	.355**	.831								
8. O	4.4034	51686	-.172**	.231**	.692**	.032	.243**	.326**	.427**	.807							
9. A	4.7485	44429	-.252**	.392**	.179*	.584**	.365**	.377**	.414**	.312**	.780						
10. C	4.5633	52026	-.303**	.297**	.062*	.215**	.754**	.319**	.376**	.343**	.437**	.850					
IPIP-MFC																	
11. ES	16.652	33629	-.305**	-.108**	-.152**	.115**	.025	.531**	-.105	-.078*	.070*	-.019					
12. E	15.222	39363	-.059	.431**	.125**	-.062*	.046	-.039	.585**	.144**	.106**	.071	-.312**				
13. O	17.391	41937	.022	-.034	.460**	-.059	.067*	-.008	.088**	.563**	-.023	1.00*	-.289**	-.021			
14. A	17.343	38892	-.025	.157**	-.028	.354**	-.061*	.027	.095**	-.072*	.455**	-.089	.045	.067*	-.204**		
15. C	17.799	4.6584	-.092**	.035	-.124**	.028	.551**	.027	.034	-.034	.064*	.640**	.002	-.142**	-.065*	-.281**	

Note. NEO-FFI = NEO Five-Factor Inventory; ES = Emotional Stability; E = Extroversion; O = Openness; A = Agreeableness; C= Conscientiousness; IPIP = International Personality Item Pool; MFC = Multidimensional Forced Choice; M =Mean; S.D = Standard Deviation; n = 1069-1123.

** , Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: Correlation Matrix with Correlation Coefficients for NEO-FFI, IPIP-Likert, and IPIP-MFC in Experimental Condition 1.

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NEO-FFI															
1. N	1														
2. E		1													
3. O			1												
4. A				1											
5. C					1										
IPIP-Likert															
6. ES						1									
7. E							1								
8. O								1							
9. A									1						
10. C										1					
IPIP-MFC															
11. ES											1				
12. E												1			
13. O													1		
14. A														1	
15. C															1

Note. NEO-FFI = NEO Five-Factor Inventory; ES = Emotional Stability; E = Extroversion; O = Openness; A = Agreeableness; C = Conscientiousness; IPIP = International Personality Item Pool; MFC = Multidimensional Forced Choice; n = 355 – 372.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4: Correlation Matrix with Correlation Coefficients for NEO-FFI, IPIP-Likert, and IPIP-MFC in Experimental Condition 2.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NEO-FFI															
1. ES	1														
2. E	-.362**	1													
3. O	-.028	.226**	1												
4. A	-.261**	.262**	.006	1											
5. C	-.409**	.392**	.110*	.311**	1										
IPIP-Likert															
6. ES	-.656**	.296**	.088	.208**	.302**	1									
7. E	-.410**	.661**	.266**	.123*	.396**	.466**	1								
8. O	-.146**	.298**	.667**	.047	.283**	.358**	.480**	1							
9. A	-.272**	.446**	.206**	.563**	.387**	.380**	.453**	.382**	1						
10. C	-.262**	.291**	.137**	.191**	.741**	.364**	.420**	.422**	.458**	1					
IPIP-MFC															
11. ES	-.343**	-.028	-.230**	.113*	.035	.559**	-.016	-.109*	.067	.095	1				
12. E	-.073	.386**	.127*	-.069	.044	-.011	.517**	.133**	.094	.018	-.300**	1			
13. O	.116*	-.091	.373**	-.097	-.038	-.065	.027	.416**	-.111*	-.031	-.340**	-.094	1		
14. A	-.027	.156**	-.002	.332**	-.098	.042	.077	-.046	.414**	-.182**	.017	.075	-.200**	1	
15. C	-.070	-.049	-.084	-.034	.505**	.031	.039	.068	.021	.595**	.046	-.163**	-.125*	-.371**	1

Note. NEO-FFI = NEO Five-Factor Inventory; ES = Emotional Stability; E = Extroversion; O = Openness; A = Agreeableness; C = Conscientiousness; IPIP = International Personality Item Pool; MFC = Multidimensional Forced Choice; n = 362 – 376.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5: Correlation Matrix with Correlation Coefficients for NEO-FFI, IPIP-Likert, and IPIP-MFC in Experimental Condition 3.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NEO-FFI															
1. ES	1														
2. E		1													
3. O			1												
4. A				1											
5. C					1										
IPIP-Likert															
6. ES						1									
7. E							1								
8. O								1							
9. A									1						
10. C										1					
IPIP-MFC															
11. ES											1				
12. E												1			
13. O													1		
14. A														1	
15. C															1

Note. NEO-FFI = NEO Five-Factor Inventory; ES = Emotional Stability; E = Extroversion; O = Openness; A = Agreeableness; C = Conscientiousness; IPIP = International Personality Item Pool; MFC = Multidimensional Forced Choice; n = 345 – 373.

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 2a: Mean scores of all traits in the IPIP-Likert and IPIP-MFC increase in the selection condition compared to the control condition, and there is a significant difference between the groups

Hypothesis 2a anticipates mean scores for traits in the IPIP-Likert and IPIP-MFC to be inflated by experimental manipulation and that the control condition and the selection condition are significantly different from each other. A one-way MANOVA can help determine if there is a significant difference between the experimental instructions. Here, a significant score on Wilk's lambda can confirm the difference between the groups, using the same levels of significance as previously mentioned. Post-hoc analyses would examine the results more deeply, but planned contrast comparisons are also sufficient. The reason for choosing the latter in this case is that the predicted result is already stated in the hypothesis. Therefore, a planned contrast comparison is more suitable for the purpose of analyzing differences between the groups. With the planned contrast comparison, one can compare the relevant groups; in this case the control condition and the selection condition. Further, significance levels for each personality trait can be reported and differences between the groups identified. Analyses for IPIP-Likert and IPIP-MFC were done separately and used as a dependent variable. The variable concerning which condition each applicant belongs to was used as the independent variable to examine differences in response between the groups. NEO-FFI was used as a control variable when examining differences between the conditions, as this measurement was administered using the same instructions for all conditions.

The mean scores in IPIP-Likert are greater for all personality traits in the selection condition compared to the control condition, seen in table 6. Further, reporting Wilk's lambda at significance level $p = .000$, there is a significant difference in responses based on experimental manipulations within the IPIP-Likert. A deeper analysis employing a planned contrast comparison between the groups found that the change in mean scores is statistically significant for all personality traits between the control and the selection condition. Hence, there is an indication of faking behavior (Appendix C). The same analyses were done for IPIP-MFC, and all traits had higher mean scores in the selection condition than in the control condition, except for agreeableness, which is lower, also seen in table 6. Reporting Wilk's lambda with significance level set at $p = .000$, mean scores of

IPIP-MFC are found to significantly differ based on experimental manipulations. However, doing a planned contrast comparison for IPIP-MFC, only conscientiousness is significantly different at the $p = .05$ level (Appendix C). Thus, changes in mean scores are inflated by experimental manipulations, but that difference is not significant on the trait level. Further, hypothesis 2a is partially supported.

Hypothesis 2b: IPIP-MFC is less inflated by the selection condition than IPIP-Likert

Hypothesis 2b considers IPIP-MFC to be less inflated by the selection condition than IPIP-Likert. By looking at effect sizes, known as Cohen’s d , it can be determined the inflation of instructions given. This number is calculated by using mean scores and standard deviations. Interpreting effect sizes normally follow a rule of thumb, where $\pm .2$ is considered low, $\pm .5$ is considered medium, and $\pm .8$ is considered high effect of treatment (Magnusson, 2014). Results are presented in table 6.

Table 6
Means, Standard Deviations, and Effect Size for Experimental Conditions 1 and 2

	Control		Selection		
IPIP-Likert	M	SD	M	SD	Effect Size
ES	4.4856	.47782	4.5916	.48643	0.1092
E	4.4701	.54366	4.5743	.54908	0.0949
O	4.3782	.53890	4.4815	.48082	0.1006
A	4.7300	.46606	4.8065	.42390	0.0855
C	4.4950	.53249	4.6466	.49007	0.1465
IPIP-MFC					
ES	16.6141	3.51033	17.0250	3.23231	0.0607
E	15.3070	4.10647	15.5167	3.72745	0.0267
O	17.2901	4.31104	17.8083	4.05731	0.0617
A	17.6028	3.76236	17.3528	3.77508	-0.0331
C	17.4535	5.03546	18.1759	4.34705	0.0765

Note. The control group was instructed that the questionnaires were a research project. The selection group was instructed that the questionnaires were an evaluation for admission to the school.

As seen in Table 6, all effect sizes of experimental manipulations are low and positive for all personality traits, indicating faking behavior as mean scores increase. However, effect sizes for IPIP-MFC are lower for all traits compared to IPIP-Likert. IPIP-Likert has effect sizes close to and above .1, while IPIP-MFC is lower on every trait. With effect size around .1, there is approximately 50% chance of the applicant in the selection group to have a higher mean score than an applicant from the control group. Moreover, meaning that there is a bigger chance of favorable mean scores in the selection group when using IPIP-Likert, than when using IPIP-MFC. However, important to notice that for agreeableness in IPIP-MFC the most favorable scores are found in the control group. Therefore, based on effect sizes, IPIP-MFC is less inflated by experimental manipulation and the scores in IPIP-Likert are more favorable in the selection condition, support for hypothesis 2b is offered.

Hypothesis 3a: Mean scores of traits in IPIP-Likert and IPIP-MFC are lower in the warning condition than in the selection condition and significantly different from each other

Hypothesis 3a predicts mean scores of all personality traits to be lower in the warning condition than in the selection condition because of the warning given in the instructions, and for the groups to be significantly different from each other concerning responses. The same analyses were used as in Hypothesis 2a, and the same statistical values are important. Analyses were done separately for IPIP-Likert and IPIP-MFC, which accounts for the dependent variables. The independent variable is the variable that divides applicants into the different experimental conditions. NEO-FFI was used as a control variable when examining differences between the groups, as this instrument was administered with the same instructions for all conditions.

The results of the MANOVA reports that Wilk's lambda is significant at $p = .000$ for both IPIP measures, meaning that there is a significant difference in responding based on experimental manipulations (Appendix C). Further, as seen in Table 7, mean scores of all personality traits are lower across the groups. Performing planned contrast comparisons, the differences in mean scores are significant for all traits in IPIP-Likert, and for emotional stability, extroversion,

and openness for IPIP-MFC (Appendix C). Moreover, explaining that applicants responded significantly different and that this difference is connected to instructions given. Further, a sign of possible faking behavior and that warning show signs to cope with it. However, given the decrease in mean scores and significant difference between the selection condition and the warning condition, hypothesis 3a is supported.

Hypothesis 3b: IPIP-MFC is less inflated by the warning condition than IPIP-Likert

Hypothesis 3b predicts the effect sizes to be lower for IPIP-MFC than for IPIP-Likert. Lower effect sizes indicate better faking resistance, as the scores do not change as much. The same analyses as in Hypothesis 2b and rule of thumb for effect sizes were used.

Table 7

Means, Standard Deviations, and Effect Sizes for Experimental Conditions 1 and 2

	Selection		Warning		Effect Size
IPIP-Likert	M	SD	M	SD	
ES	4.5916	.48643	4.4714	.45571	-0.1264
E	4.5743	.54908	4.4336	.58119	-0.1234
O	4.4815	.48082	4.3470	.52025	-0.1330
A	4.8065	.42390	4.7083	.43834	-0.1131
C	4.6466	.49007	4.5424	.53613	-0.1009
IPIP-MFC					
ES	17.0250	3.23231	16.3429	3.29573	-0.1039
E	15.5167	3.72745	14.8905	3.96802	-0.0810
O	17.8083	4.05731	17.0605	4.15583	-0.0906
A	17.3528	3.77508	17.0461	4.09047	-0.0389
C	18.1759	4.34705	17.7522	4.58783	-0.0473

Note. The control group was instructed that the questionnaires were a research project.

The selection group was instructed that the questionnaires were an evaluation for admission to the school.

As seen in Table 7, the effect sizes are low and negative for both IPIP-Likert and IPIP-MFC, meaning that warning does have an impact on mean scores by lowering the scores collected in the selection condition. The warning also have

less effect on IPIP-MFC, which is expected, as the effect sizes for IPIP-MFC were lower in the comparison between the control condition and the selection condition as well. Out of effect sizes being above .1 there is read that more than 50% got a less favorable mean score when given a warning for the IPIP-Likert. For IPIP-MFC, this is underneath 50%. There was expected to be lower for IPIP-MFC after expecting the ipsative measurement to be more faking-resistant. Concluding that warning have an impact on possible faking behavior by leading to less favorable mean scores in both IPIP-Likert and IPIP-MFC, but less for the latter. This supports hypothesis 3b.

Hypothesis 4: The IPIP-MFC predicts admission to the Officer Candidate School better than the IPIP-Likert in the selection group, and IPIP-MFC predicts more consistent than IPIP-Likert across all conditions

Hypothesis 4 concerns the predictive validity for the IPIP-MFC regarding who is accepted to the school exceeding that of the IPIP-Likert, and the consistency across experimental conditions. Multiple regression analysis was conducted to determine the variance in admission explained by personality traits and to notice the impact of each trait on admissions to the school. When conducting regression analyses, it is important to determine if the model is significant. In this case, two models were created, one with the IPIP-Likert, and one for the IPIP-MFC, in each experimental condition. For both measurements, the variable of admissions to the school is the dependent variable, while the personality traits from the IPIP-Likert and IPIP-MFC are independent variables. If the model is significant, then R squared (R^2) can indicate how much of the variance is explained by the model. Multiplying R^2 by 100 results in this number as a percentage. Even if the model itself is significant, it is important to notice significance levels of each trait. Here, the significance of Beta (β) values is reported. Beta values show the impact of each trait on the model, and if the impact is negative or positive on the dependent variable. Further, higher the number is for the Beta value; higher is the impact on the model. Results for hypothesis 4 are presented in table 8.

The direct relationship between admission to the school and the personality traits is low, and there is not a linear relationship, in any of the experimental conditions. However, all models but IPIP-MFC in the control condition were significant. IPIP-MFC shows better explanation of the variance of

admissions in the selection condition, however, IPIP-MFC and IPIP-Likert has approximately the same explanatory power. When looking at explanatory power across conditions IPIP-Likert is higher in the warning group than in the selection group. A possible explanation for this occurrence could be that warning copes with faking behavior, and therefore produce scores that are more accurate. Further, IPIP-MFC has more aligned results between the selection and the warning condition. However, as mentioned, the lowest explanation of variance in the control condition.

Table 8

Standardized betas (β) and R^2 for IPIP-Likert and IPIP-MCF across all experimental manipulations

	Control group		Selection group		Warning group	
	β	R^2	β	R^2	β	R^2
IPIP-Likert		.037*		.041**		.051**
ES	.042		-.045		-.013	
E	.127*		.156*		.156**	
O	-.112		.039		-.041	
A	-.026		-.044		.031	
C	.128*		.101		.120*	
IPIP-MFC		.018		.046**		.041*
ES	.060		-.079		-.031	
E	.143*		.127*		.073	
O	.004		-.002		.019	
A	.028		-.028		.121*	
C	.054		.147*		.179**	

* Correlation significant at the 0.05 level (2-tailed).

** Correlation significant at the 0.01 level (2-tailed).

Dependent variable: Admissions to Offices Candidate School. Independent variable: IPIP-Likert and IPIP-MFC.

From table 8 there is noticed that extroversion and consciousness have the most positive impact on being accepted to the school for both IPIP-Likert and IPIP-MFC. Further, extroversion has significant impact in all conditions, but within the warning group of IPIP-MFC. Consciousness shows to have significant impact in all conditions, but the selection condition for IPIP-Likert, and the control condition for IPIP-MFC. There is interesting to notice that emotional stability and agreeableness in IPIP-Likert has negative impact on being accepted,

while emotional stability, openness, and agreeableness shows negative impact for IPIP-MFC on being accepted to the school. This means that extroversion and conscientiousness are the favorable traits in being accepted and to have positive impact on the decision. While the other traits seems to have less explanatory power, and in some cases negative impact on admissions.

Over all, the results show signs of faking behavior, and warnings to cope with this occurrence. Further, both IPIP-Likert, and IPIP-MFC have scores being close to each other, and therefore not much impact on the potential faking behavior. IPIP-MFC predicts admissions to the school better than IPIP-Likert in the selection condition, however less than 1% better. Speaking of consistency, IPIP-MFC shows better scores between the selection and warning condition, where faking behavior is expected. While IPIP-Likert have better consistency across all conditions, resulting in partly support for hypothesis 4.

Discussion

The main reason to use ipsative measurements are their potential to cope with faking behavior, and previous research supports this suggestion (Jackson et al., 2000; Christiansen et al., 2005; Heggstad et al., 2006; Salgado et al., 2015). However, previous research has mostly been conducted in laboratory settings, where faking behavior is tested in honest and faking conditions. A typical honest condition involves participants thinking of a desired job and then answering questions as honestly as possible. The faking condition consists of participants thinking of a desired job and being instructed to fake their scores (Bradley & Hauenstein, 2006; Heggstad et al., 2006). This master thesis is distinguished from other research by collecting data in a real-life setting. The participants are naturally motivated, as they seek a spot in the Officer Candidate School. The three aforementioned experimental conditions make it possible to see how responding to personality measurements plays out in a real selection process, and further how experimental manipulation can moderate this relationship. All analyses were done to answer the research question: *Will ipsative measurements be more faking-resistant than normative measurements?*

The first step was to determine if the construct validity was stable across experimental conditions and if the IPIP-MFC provides normative trait information, as expected from other studies (Bowen et al., 2002; Heggstad et al.,

2006). Correlation analyses are conducted across all three groups. As the correlations did not differentiate much, there is observed good construct validity. The IPIP-Likert and IPIP-MFC correlated highly and positively in all conditions, and is therefore argued to measure the same construct even when manipulation takes place. However, the IPIP-MFC correlated moderately with the NEO-FFI, while the IPIP-Likert and NEO-FFI correlated highly and positively in all conditions. This occurrence can be explained by the difference in response design and items between the IPIP-MFC and NEO-FFI, while it is correlating better with the IPIP-Likert because of the overlap in items. Overall, the measurements correlate well with each other, and all cover the same constructs in the Big Five model of personality. The opposite would mean that faking behavior as well as not measuring the same construct could inflate measurements. Construct validity is important because it provides a sense of the measurements' relevance and a foundation for predictability (Messick, 1980). Hence, this is a natural place to begin analyzing the data.

Significant differences are found between the control and the selection condition, and between the selection and the warning condition, based on experimental instructions. Faking behavior is observed as the mean scores of both IPIP-measurements increase from the control to the selection condition. This supported the expected results as applicants are naturally motivated and want to be accepted to the school and is also consistent with previous research indicating that applicants can and do fake on personality measurements (Rosse et al., 1998; Viswesvaran & Ones, 1999). As long as the motivation is strong, applicants will try to give a desired impression connected to the position sought. Further, it is interesting to notice that it happens in a real-life process, where the motivation also is real. Moreover, mean scores decreased when applicants were given a warning that faking would be detected. Here, mean scores were similar to responses in the control condition, indicating that warnings may help produce accurate scores, in coherence with previous research (Dwight & Donovan, 2003; Rothstein & Goffin, 2006). Interestingly, scores noted for all traits in IPIP-Likert analyzing differences between the control and the selection condition, and between the selection and the warning condition showed to be significantly different from each other. This only occurred for few of the traits in the IPIP-

MFC, which could indicate that IPIP-Likert is more inflated by applicant faking behavior.

The significant difference between the groups confirms the implications of experimental manipulations as well as that people who are motivated to fake answers significantly differ from those who are not. In addition, the use of a warning appears to be able to reduce the motivation to manage scores on personality items.

Calculation of effect sizes between the control and the selection condition shows the expected results that the IPIP-MFC is more faking-resistant than the IPIP-Likert. Mean scores did increase on both measures, and the effect sizes were not large for the IPIP-Likert. However, effect sizes were smaller for the IPIP-MFC, providing some evidence of better coping with faking. In comparison to the high and positive correlation, it might be seen as the better alternative when conducting personality measurements on job applicants. In addition, it was the expected result when analyzing the selection and the warning condition as well. The effect sizes were larger for the IPIP-Likert, as the scores were more distorted in the selection condition than for the IPIP-MFC. This confirms that the warning increases faking-resistance by lowering mean scores and explains why the scores on the IPIP-MFC were more consistent. However, it is important to highlight that none of the effect sizes were large. In sum, applicants do not as easily distort the IPIP-MFC, resulting in smaller effect sizes when comparing the control and the selection condition, as well as for the comparison between the selection and the warning condition.

The predictability for any of the IPIP measures is low for predicting who was accepted to the school within the selection group, but IPIP-MFC showed slightly better results. Furthermore, there is no linear relationship, which might be a reason for the weak predictability. For both IPIP measures, less than 5% of the variance is explained by the personality traits. On the other hand, this could be explained, as there is many other important aspects considered when accepting people into the military. Some such aspects might be leadership evaluation, motivation, officer evaluation, interviews, cognitive ability, and physical tests. However, IPIP-Likert showed better overall consistency when looking at the results and the explanatory power increased when the warning was added, indicating warning to cope with faking. On the other hand, IPIP-MFC showed to

be more consistent between the selection and the warning condition, indicating the multiple forced-choice measurement to be less inflated by the manipulation and faking behavior in the selection condition. In total, it does not seem like faking behavior have a large impact on the predictability across experimental manipulations for either of the personality measurements, rather that the predictability is low in general.

Moreover, extroversion and conscientiousness stood out as the best predictors in both measurements, while the other traits had either low or/and negative impact on admissions to the school. When looking at standardized beta scores, extroversion showed to have most influence of the personality trait in being accepted to the school, which is interesting concerning previous research in leadership and managerial positions.

Seeing all analyses in a total, IPIP-MFC shows signs to cope better with faking behavior than IPIP-Likert. However, both measurements have quite similar results. Faking behavior is examined in three ways, looking at changing correlations, changing mean scores, and changing predictability across experimental manipulations. In total, IPIP-MFC shows to be the most consistent measurements, even though IPIP-Likert is close to the same levels. Further, warning also shows to impact on faking behavior in both measurements, and help to produce scores that are more accurate.

Limitations

As in all research, there are limitations. The design of normative measurements should have been aligned. The NEO-FFI and IPIP-Likert use different response scales, which makes it impossible to directly compare scores. However, analyses that do not consider mean scores are also conducted, as this is a study on normative versus ipsative measurements. Nevertheless, using the same scales for normative measurements would make them more comparable.

First, the IPIP-Likert uses a scale ranging from 1 to 6, making it impossible for the applicants to be neutral. The original design of the Likert scale is a range from 1 to 5, making all options available (Boone & Boone, 2012). By having a scale from 1 to 6, one forces the applicants to make a choice, which might not be ideal when accurate responses are desired. However, removing the

mid-point and forcing participants have to make choices might generate more clear results. In addition, there is no right and wrong, but removing the mid-point might generate different mean scores than by using it (Garland, 1991). Further, the NEO-FFI uses a 5-point scale, and the participants do not have to select the same choice on both of the normative measurements. This connects to the first limitation mentioned, that the response design is not aligned in the normative measurements.

Second, this is a study in a military setting, and although it presents results from a real selection process, one cannot directly compare it to other jobs in the private or government sector. For instance, the results might be different from the military than for students facing their first job and experienced workers that are changing jobs. The importance is to highlight that results from one real-life setting do not necessarily apply to all real-life settings.

Third, in general there might be extensive analyses possible to conduct that could shed light on some of the results generated or highlighting other viewpoints being interesting to examine. The main aim was to cover analyses needed to answer the research question, but other interesting angles to this problem might be possible using the data already gathered.

Future Research

Future research is needed for a more extensive analysis, but also to use the same methods in other settings if possible. It is not easy to gather data from real-life settings, but it can be valuable. Data about personality measurements in real-life settings are important to advance knowledge, especially regarding the interpretation of measurements when hiring. In addition, more research on ipsative measurements in selection processes will give increased power to explanations about faking-resistance and predictive validity.

Moreover, it would be interesting to examine how faking happens and who the fakers are. Deeper analyses on how cognitive ability moderates the relationship to faking behavior are required. In addition, if people with high cognitive ability differ in their response strategy from other people.

In general, more research on faking and predictive validity of both ipsative and normative personality measurements done in real selection processes will be more practical and relevant for employers in their daily work.

Conclusion

Results support the use of multiple forced-choice measurements to provide normative trait information and to have good construct validity across experimental manipulations. Faking behavior did appear in the selection condition, indicating that experimental instructions moderate results of personality measures. Of note, motivation to fake was stronger for the selection condition, with higher mean scores than the other conditions, but higher increase of mean scores for IPIP-Likert than IPIP-MFC. Further, low effect sizes were noticed and the IPIP-MFC showed signs of stronger faking-resistance than the IPIP-Likert. Moreover, IPIP-MFC has scores not being significantly different between experimental conditions, which on the other hand occurred for all traits in IPIP-Likert when analyzing groups with each other. Moreover, indicating faking behavior to be stronger for IPIP-Likert.

The use of a warning did also show signs of reducing faking, as mean scores dropped when comparing the selection and the warning condition. The largest effect sizes appeared in the IPIP-Likert, which is a natural occurrence since the IPIP-MFC was less inflated by faking behavior in the selection condition as well. Moreover, the IPIP-MFC showed more consistency across experimental manipulations. The predictive validity of both measurements was aligned and low in predicting admission to the school, with the IPIP-MFC to be marginally better within the selection condition, but the IPIP-Likert to be more consistent across experimental conditions.

However, signs to cope with faking are observed, and the IPIP-MFC shows the best indications to deal with applicant faking and to have scores that are more consistent across experimental manipulations. On the other hand, IPIP-Likert and IPIP-MFC showed quite similar scores, but IPIP-MFC is slightly better in relation to faking resistance. Moreover, other ways to deal with faking might also be appropriate, such as the use of warnings, which showed promising results in this thesis.

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BI Norwegian Business School - Preliminary Thesis Report

- Personality Measurements and Applicant Faking -

“Will ipsative measurements be more faking resistant than normative measurements?”

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Introduction

Personality inventories and other work psychological tools and methods are widely used in recruitment processes, which has also shown to be interesting for researchers throughout history (Smith & Ellingsen, 2002). Such inventories have shown to be good predictors for job performance and other important work-related behaviors (McFarland, Ryan, & Ellis, 2002; Smith & Ellingsen 2002; Donovan, Dwight, & Hurtz, 2003; Rothstein & Goffin 2006; Salgado & Tauriz, 2014), and it are therefore easy to understand why tests are popular when recruiting. No one wants to use money and energy on employing the wrong person to their organization with all the negatives it comes with in form of economic loss, lower performance, and bad influence in the work force (Allen 2006).

The widely usage of tests has raised questions about how susceptible such measurements are to faking (Viswesvaran & Ones, 1999). Respondents are able the fake their scores on personality measurements (Rossie et al., 1998), and research shows that a lot of people also does engage in such behaviors (Donovan, Dwight & Hurtz, 2003). Due to this, Hogan, Barrett & Hogan (2007) finds that faking is not a significant problem when it comes to real selection processes. While others find mixed results and that there is too little evidence to support that faking is *not* a challenge when conducting personality measurements on job applicants (Dingguo et al., 2012). However, there are concerns with faking applicants and their effects on rank orders of individuals (McCloy, & Reeve, 2005; Dilchert et al., 2006), and to the validity of the tests (Mueller-Hanson, Heggstad & Thronton, 2003; Heggstad, Morrison, & Reeve, 2006), where the predictive validity will be addressed in this thesis through the research question:

Will ipsative measurements be more faking resistant than normative measurements?

The research question does consider the two categories of personality measurements, ipsative and normative, and how the predictive validity is due to faking. Since ipsative measurements are designed to deal with faking, and does not rank order individuals as normative measurements (Bowen, Martin & Hunt, 2002), it is interesting to examine these tests. Ipsative measurements did not show to defend against faking in laboratory setting during faking conditions

(Heggstad, Morrison & Reeve, 2006). Hence, it is interesting to address this problem in a real selection process. Normative measurements are on the other hand a test where it is easier to fake scores, and do impression management (Bowen, Martin, & Hunt, 2002). Hence, more research on faking is critical to better understand it in real life settings.

To answer this question the following research design is divided into three different conditions, where there are approximately 300 applicants in each group. Everyone answer ipsative and normative tests, as well as schemas for job theory and impression management. Group one answer in a condition for research purposes, the control group. Group two answers in a real life setting where the results counts in the selection process, the experiment group. And group number three answers the same tests, but got a notification that there is a lie scale that will see if they fake the scores. The research design will be more thoroughly described in an own chapter.

Ipsative versus normative measurements

Concerns of faking led to the development of the ipsative format of performing a personality measurement, beside the already developed normative measurement. Ipsative tests are designed to cope with faking, and designed to make it harder to do social desirable responding (Bowen, Martin, & Hunt, 2002). Ipsative measurements are a tool where it creates a rank ordering of personality traits within a particular individual, and not rank ordering of traits between applicants. This is one of the main criticisms towards this kind of test; as you cant compare individuals with each other. However, this is a problem that can be coped with by having a large number of scales in the questionnaire (Bowen, Martin, & Hunt, 2002). A multiple forced choice item (MFC) is a type of ipsative measurement, and contains two or more statements, where the applicants need to choose between them. The applicant then choses what is most preferred, least preferred, most like me, or least like me to generate a picture of the personality. In this way the applicant cannot score and look good on all statements (Heggstad, Morrison, & Reeve, 2006), and ipsative tests then shield better against faking (Bowen, Martin, & Hunt, 2002). Hence, the criticism as ipsative tests does not rank order the applicants, might also be its strength. Since the focus will change to the traits measured in the person, and not how the person scores according to others.

Normative measurements on the other hand is most often done in a way where the applicants answers different statements on a likert scale (e.g., from 1-5), where one are supposed to indicate preferences from one to five to generate a picture of the personality. With this type of measurement, social desirable responding is easier. For instance, if there is applied for a position as a salesman, and one of the requirements is to be around people as part of the job description. If a statement sounds like “I like to be around people”, it is easy to answer high on this, and at the same time know how it looks like for the recruiter. Making some traits skewed to the right on desired traits and to the left on undesired traits. A skewed score will mean that the average is moved, making a possible problem in the rank ordering of applicants (Bowen, Martin, & Hunt 2002). Dishonest information is then influencing the ranking and the average scores to be wrong. Rosse et al. (1998) finds this to be a problem if there are only a few extreme fakers distorting their scores, while the problem might not occur if all applicants fake. It is important to distinguish between ipsative and normative as two different methods, but that measures the same construct. With normative measurements one can rank order the applicants and compare everyone with each other (Bowen, Martin, & Hunt, 2002).

Rank ordering of applicants

A major discussion within measurements of personality is how it does affect the rank ordering of applicants. There are anxieties related to this problem, and if faking brings in the wrong applicant into the company (McCloy, Heggstad, & Reeve 2005; Dilchert et al., 2006). Assume that a personality measurement has great influence on the rank ordering of applicants, it could also have a great influence on who gets the job, and influence important decisions (Dilchert et al., 2006). Further this could create problems because the person selected might be less qualified than a person who didn't fake, but because of others motivation to manage their scores became a victim to faking. It is just a problem if it affects the outcome directly because of the test score (Donovan, Dwight, & Hurtz, 2003; Winkelsprecht, Lewis, & Thomas, 2006). McCloy, Heggstad and Reeve (2005) finds that the problem with faking and rank ordering of applicants is especially concerned in the upper tail of the scores. Although, Hogan, Barrett & Hogan (2007) doesn't not find this to be significant problem, but Dingguo et al. (2012)

argues that mixed results indicate that one cannot not say for sure that faking does not affect rank order.

When discussing rank ordering of applicants, there is important to notice that ipsative measurements, as mentioned, does not generate ranking of how the applicants score on the different traits. These measurements measure the traits within the applicant based on forced choice statements (Bowen, Martin, & Hunt, 2002). As ipsative measurements show what are the strongest and weakest traits within an individual, one does not know the exact scores on each trait. Hence, it is not possible to have the rank order of applicants, but neither to answer desirable on each trait. Some might argue that ipsative measurements do generate more valid results, as the respondents have to make more choices than on normative measurements (Baron, 1996). It is then possible that the ipsative measurements generate more focus towards the individuals and how they fit the job and the organization, rather than aiming to rank all applicants to see whom scores highest or lowest on each trait. Personality measurements are about understanding how an individual is and how they act, not necessarily to compare them with each other. By looking at research and job analysis, an organization should have an opinion about what kind of person they want, without rank ordering the applicants on personality traits, and they can make it more difficult to fake at the same time.

Ipsative measurements was made and designed to cope with faking, impression management and social desirable responding (Bowen, Martin, & Hunt, 2002). This means that it is supposed to be more difficult for applicants to fake their responses on measurements of personality, and also the reason for why the ipsative measurements are used in recruiting (Salgado & Tauriz, 2014). However, even though a balanced forced choice test make it impossible to receive the maximum score for two scales (Meade, 2004), there haven't shown uniformly to defend against faking (Heggstad, Morrison, & Reeve, 2006). The question is however if ipsative measurements creates a remedy to the problem? Yes, they do not rank the applicants on the traits as normative measurements do, and it may be helpful to rank the traits within the applicant instead. One will then focus on the individual, rather than how applicants answers in relation to each other. However, more research is needed as most research on ipsative measurements to shield against faking is done in laboratory settings (Heggstad, Morrison, & Reeve, 2006).

Previous research

As mentioned, Heggstad, Morrison and Reeve (2006) find that ipsative measurements, as normative measurements are not a viable method to defend against faking, during faking conditions. Even though forced choice measurements are fakeable, it shows to be a better indicator of personality and less related to social desirability when responding for an actual job (Christiansen, Burns, & Montgomery, 2005). Ipsative measurements are less susceptible to faking (Jackson, Wroblewski, & Ashton, 2000), and with a balanced forced choice test it is impossible for the respondents to generate the maximum scores for two items in the same item set (Meade, 2004), further it is still criticized regarding both construct and criterion-related validity (Meade, 2004; McCloy, Heggstad, & Reeve, 2005).

It is important to better understand how these test operate in different conditions, and how they deal with faking in a real selection process, where the applicants actually wants the job, and not just pretend to, as in laboratory settings. Despite the criticism companies use forced choice inventories, highlighting the importance for more research on the topic. Hence, research concluded that applicants could fake, when instructed to do so (Viswesvaran & Ones, 1999; Heggstad, Morrison, & Reeve, 2006). However, it is then unclear how this plays out in the real selection process, when applicants behave according to own thought rather than being directed to answer in a certain way. Bowen, Martin and Hunt (2002) highlight that even though the applicants have the ability to fake, it is not sure that they have the motivation to do so, indicating more research needed. Even though individuals have taken the test during honest conditions, and not been provided with guidelines, there is still not a job they actually wants and have been willing to apply for of free will. Further the research design for this thesis will be presented clear out how the design will contribute to this field of research.

Based on the abovementioned about ipsative versus normative measurements, this lead up to the first hypothesis for the thesis. Considering what kind of test that is most preferable when aiming for predictive validity. In other words, examining ipsative measurements position against normative in predicting personality through tests. To be able to examine this type of hypotheses, group one (control group) and group two (experimental group) provide this data.

H1: The ipsative measurement will have more predictive validity than the normative measurement in a real selection process.

Faking

There is important to understand the concept of faking and how it is perceived. Faking can be divided into *faking good* and *faking bad*. When *faking good* is when the respondent tries to leave a better impression, and *faking bad* happens when leaving a negative impression (Jackson, Wroblewski, & Ashton, 2000). Hence, impression management, social desirable responding, and other ways to provide a different result on personality measurements than the reality, is considered faking. There is agreed in the research that applicants can and does fake their scores on personality measurements (Rossie et al., 1998; McFarland, Ryan & Ellis, 2002; Donovan, Dwight, & Hurtz, 2003; Robie, Brown, & Beaty, 2007), but it is also shown that there are individual differences in the ability to fake on such measurements (Dilchert et al., 2006). Meaning the difference in ability will affect the faking occurrence on measurements, but some might also fake unconsciously and actually have a mistaken image of how they are in relation to the questions asked. As would mean that it is difficult to handle faking if it done with intention, but faking in an unconscious state is also possible. How to cope with faking will be further examined in another chapter. However, research is mainly focused in laboratory settings and concluded that applicants can fake, when instructed to do so (Viswesvaran & Ones, 1999; Heggstad, Morrison, & Reeve, 2006). Hence, there is found that scores on measurements is in many cases more desirable, than if the measurement where answered honestly in a selection process. The difference lies in how good the applicants are at faking and impression management (Winkelsprecht, Lewis, & Thomas, 2006). It is also essential to mention that the normative tests are easier to fake, than ipsative measurements that defend better against it (Bowen, Martin, & Hunt, 2002).

When faking good the applicant want to put themselves in a good position for what is desirable for them, and in this case that is a job opportunity. Individuals are able to change their responses and positioning of their traits when faking good (Viswesvaran & Ones, 1999). In other words, applicants are able to do impression management on desired traits and make themselves look more favorable by lying. The applicants have a choice between answering accurate or

by what's thought to be desired (McFarland, Ryan, & Ellis, 2002). Viswesvaran & Ones (1999) further finds that personality measurements were more susceptible to faking bad, than faking good. It is then interesting that the literature almost without exceptions are interested in faking good (Dingguo et al., 2012) and that faking bad isn't examined as a way to generate a desirable picture of one selves.

Faking bad is to present a negative impression in specific traits, or in total on the measurement given (Jackson, Wroblewski, & Ashton, 2000). An applicant may think it is good to leave a more negative impression on undesired traits, to probably generate desired response on being perceived for the job. Instead of faking by looking good on desired traits, looking bad on undesired traits might leave the same result. Traits or scales that are perceived to be important to job performance are more exposed to faking (Khorramdel, Kubinger, & Uitz, 2014). These are aspects of recruiting that need more research to understand what happens when a job opportunity is at stake in a real selection process, and especially how and if faking bad occurs.

Why does faking occur, and which problems arise?

To understand why faking occurs one need to look at what motivates the applicant, and why faking might be beneficial. McFarland, Ryan and Ellis (2002) finds that applicants want to make a good impression when it will make it easier for fulfillment of desired outcomes. And further says that when applying for a job and goes through a selection test, a desired outcome is generally to get the job. Research is done on faking in laboratory settings (Heggstad, Morrison, & Reeve, 2006), but it is important to continue this when personality is measured in a real selection process as well. There could be differences in actually testing yourself for a real job, rather than just pretending that a real job is at stake. Because of both transferability to recruitment practices, but also to understand underlying mechanisms.

This is important because organizations use such measurements to know whom they hire, and to hire the right person for the job. People who score highest on desired traits could be more likely to be selected, but also be in a position where they doesn't actually possess the traits expressed through the test (Rosse et al., 1998; Mueller-Hanson, Heggstad, & Thronton, 2003). Hence, faking could create problems according to the rank ordering of applicants, as discussed above.

The recruitment process is in that case just the beginning. By hiring the wrong person will also impact the further development in the position (Schmidt & Hunter, 1998), but might also affect the organizational culture.

In a recruitment process there is normally a lot more that is taken into account. For instance has interviews and probably case solving a big impact on who is chosen in the end, and the effects of faking could then be minimized in the total picture when using several sources to increase validity in the process (Schmidt & Hunter, 1998). There are mixed results in how much faking has to say on the validity of personality testing. While Donovan, Dwight and Hurtz (2003) finds that the validity and quality of the recruitment process isn't debilitated in a high degree from potential faking, Winkelsprecht, Lewis and Thomas (2006) on the other hand is more scared of the consequences in an actual selection process. There is various ways to cope with faking; both through what kind of test that is used, and different variations of measurements. The following chapters aim to focus on how different tests and measurements are built and how they consider faking in the recruitment process.

However, it is important to give this topic more attention due to the possible consequences when hiring. More attention is important for all organizations, recruitment professionals, academics, and also the people being employed, too gain more knowledge about real selection processes.

The traits measured and their importance in faking

It is important to assess how applicants fake on a deeper level, than just conclude that faking occurs. Personality tests based on research are normally made out of Costa and McRae's (1992) big five personality traits. The tests will then measure extroversion, agreeableness, neuroticism, conscientiousness, and openness to make a picture of an applicant's personality. When connecting this to faking it depends on the job being applied for. Different jobs demand different personality profiles, so for an applicant to make themselves look better by faking, they also need to do this on the traits that are most desired for a certain job. To know about these personality traits, and their connection to job performance, and which of them that is normally desired for specific jobs might be information those with the best ability to fake can exploit. As Dilchert et al. (2006) finds people to differ in their ability to fake, such information might play a crucial role between the one

that are good and bad at faking.

However, some traits are normally important in all occupations, and also better to predict job performance. Conscientiousness is an important indicator for success in a job, regarding the quality of the work done and the awareness within oneself (Schmidt & Hunter, 1998; Dudley et al., 2006). We can then imagine that this trait is a popular one when faking good, as from research it is a good indicator for future success at work. Further emotional stability is also a valid predictor for most occupations, naturally because employers want people with a stable mindset at work. The last three traits depends more upon the type of job and what kind of organization one is supposed to work for. Extroversion and agreeableness is important in jobs that demand interpersonal factors for success (Salgado, 1997). However, people scoring low on extroversion could just as well be good at sales, which is popular to connect to extrovert people, because of their ability to listen and find out of the customers needs.

Further, openness to new experiences is a valid indicator for training criteria (Salgado, 1997). Openness could also be seen as something being important in a lot of occupations, considering a complex and fast changing world with diverse workplaces. The important thing is to understand how applicants fake and which traits being seen as desired. Are those the same as the organizations think of? Another question is if the applicants only fake good on desired traits, or if they also fake bad on undesired traits? To have an understanding of faking, and why it is done, it is also essential to know on which traits faking occurs. Hence, how does an applicant know what the desired traits for an occupation are? Mahar et al. (2006) finds that one strategy for this can be stereotyping. The applicants will then answer according to the stereotype of the people working in the organization, but without negative aspects. In other words, they will try to be the perfect version of the stereotypes. Other ways to know about desired traits could be by talking to people, and do good research before applying.

Summed up, Schmidt and Hunter (1998) finds conscientiousness and integrity, together with cognitive abilities, to be good predictors for job performance. Integrity is then proposed being measured through agreeableness and neuroticism. Hence, it is natural to believe that the mentioned traits are especially important to keep an eye on when examining applicants and their scores on personality measurements. These are good predictors for future job performance, and therefore a possible target for a faker in the recruitment process. Leading up to the

next hypothesis. Desired traits are more susceptible for faking (job schema), and is more important in a real selection process (group two), than in reasearch settings (group one).

H2: There will be a greater increase in the average score on desired traits in the normative measurement than to the ipsative measurement comparing group one with group two.

Coping with faking

There is done work and attempts to defend against faking, where a lot of tests have a correction for faking that improve the validity (Goffin & Christiansen, 2003). As abovementioned, researchers generally agree that individuals can fake their responses, but there is no uniformly agreement surrounding how faking affects the validity of personality measurements (McCloy, Heggstad, & Reeve, 2005). One cannot be sure if everyone fake their scores unconsciously, or if just some applicants does it by intention. Rosse et al. (1998) finds that neither validity or rank order is affected if all applicants manage their scores, but that it is the extreme fakers that could achieve something, if only a few chose to fake. These fakers could then possibly change rank order, and in worst case who gets the job. The problem of rank ordering of applicants and faking will be further examined.

When personality tests are used widely and tests are poorly chosen, the link between job and personality will not be correct (Murphy & Dzieweczynski, 2005). If one knows more about the effects of faking, and the underlying patterns of this behavior, personality testing could be leveraged to a higher degree in selection processes (Goffin & Boyd, 2009). Hence, coping with faking might not generate the wanted effects if the organization does not have the obligatory skills to perform a personality measurement in the first place. One has to start with establishing a professional recruitment process with the skills and knowledge needed to handle the information gathered. One also wants to cover faking as a problem, but not before one have full control of professional recruitment. The accuracy of hiring the best possible person lies most importantly in the process used by the organization (Murphy & Dzieweczynski, 2005)

First of all, faking can be coped with by using several methods in the recruitment process to increase validity and to have multiple sources to provide

valuable information (Schmidt & Hunter, 1998). The increased validity by adding more sources of information, make it easier to be sure that the right applicant is picked for the job. An example of this could be that the recruiters uses the job interview to talk through test scores, to see if what the applicant say and describes are in line with the answers given. Relying on just one source of information will not be preferable, as this may be inaccurate, and will not cover the depth of the applicant's personality or other abilities in the applied position (Schmidt & Hunter, 1998).

There are also different opportunities to cope with faking within the personality test as well. One can ask questions about topics in a random order, so the applicant can't be totally sure which trait is being measured. One could also ask the same question with other words, to see if the answers change. However, another possible way to cope with faking is to make a warning that says the test will find out if you fake. This has according to Rothstein and Goffin (2006) shown positive results, and it may be because the applicants are afraid of not want to play the desired role, when they know the organization is looking for faking. Meaning that only the message itself could possibly be scary for someone to answer more desirable. Hence, this could also generate an effect that is not wanted. If the applicants are afraid of being caught in faking, someone may make himself or herself look worse, to be secure, and further not be hired even though they would have got the job. To deal with faking in such ways demand a thoroughly process, where the organization make up their mind about positive and negative effects related to coping strategies.

A further discussion is what kind of test to use to deal with faking, and if other solutions, as warnings, can shield against it as well. The next hypotheses will test this, as group three in the experiment received a warning that a lie scale will detect if they fake on the test or not (group three), compared to a real selection process without this warning (group two).

H3a: The ipsative measurement will show to be consistent on trait scores when comparing group two with group three.

H3b: The normative test done by group three will have a lower average score on desired traits, than the normative test done by group two because of the warning.

Research design

Through examining the field of personality measurements and faking, four hypotheses are conducted to investigate what is going on. H1 considers that ipsative tests will have better predictive validity than normative tests. H2 considers ipsative measurements to be more consistent than normative measurements across group one and two. Looking at how the average score on desired traits develop between group one and two tests this. Hence, ipsative tests will have a lower increase on these scores than the normative tests. H3a concerns ipsative tests to be consistent across group one and three, while H3b is the last one, and considers the usage of warnings to cope with faking, and that the average score on desired traits are lower when this warning is given on normative measurements. Examining a way for normative measurements to better cope with faking. Further the research design for the study will be thoroughly described.

For this thesis, data and research design are handed from supervisor Øyvind Martinsen and contains of three different conditions for testing, and three different personality measurements in total. One of them (NEO-Five-Factor Inventory, a normative measure) is done in the same way for all the different conditions, where the applicants are informed that it is used for research only. While the other two tests is built on IPIP, one IPIP-likert (normative measure) and one IPIP-Multidimensional Forced Choice (ipsative measure). These two measures have changing conditions. In all conditions a schema of job theory and impression management is provided, making it possible to examine which traits the applicants find desirable and not. The project has been conducted on approximately 900 military applicants that have applied for Officer Candidate School, where the respondents are randomly selected for each of the three conditions. However, it is important to notice that by this research design it will be examined how ipsative measurements defend against faking in a real selection process, and in relation to normative measurements.

Condition one: The participants get instructed that their answers in the following tests are for research only. They start with the NEO-FFI, which is the same condition each time. Further they answer the two IPIP tests, a form on job theory, and eventually a form of impression management. This condition is accounted for at the control group, and will provide data on answering the tests as honestly as possible, by way of a research project. Condition one is important in

this thesis to be able to grasp important information about faking in the other parts of the research design. Hence, this condition and group of people are especially important in relation to condition two.

Condition two: The NEO-FFI is taken with the same conditions as with condition one, but the IPIP measures change. Before answering IPIP-likert and IPIP-MFC the participants gets instructed that the answers will be used in the selection process. Followed by the form of job theory, and the form of impression management. This is the experiment group, and distinguishes from other research by examining faking in a real selection process. Answers given in this condition affect whom is approved or not. Making the condition fairly interesting because the applicants actually want this job, and has not been directed to apply for it, or to answer according to given guidelines. The forms of job theory and impression management gives valuable insight in how the applicants think in such recruitment process, and which traits they find desirable in that position. Further, the comparison of condition one and two make it possible to examine how faking occurs in a pure research setting, and in a normal recruitment process. Hence, providing the difference from other research done in the field.

Condition three: The NEO-FFI test is done the same way as in condition one and two. Further they are informed that answers on the IPIP-likert and IPIP-MFC will count in the evaluation of the participants, followed by the instruction that there is a “lie scale” in the tests, which will reveal if they fake or not. Lastly the form of job theory and impression management is handed out. This condition is closely related to what other researchers have done. It is still a real selection process, but instructions is given that might affect the answers, as in laboratory settings. However, it is interestingly to see if the lie scale affects how the applicants answer in relation to what the answer about desired and implicit undesired traits. If the lie scale scare the applicants to not fake on desired traits as mentioned in the research (Rothstein & Goffin, 2006), or if they may fake bad on these traits.

These three conditions will make it possible to examine how faking occurs in research projects, real selection processes, and in real selection processes with additional guidelines. The most important is the relationship between research and real life, which facilitate for taking the research in the field further, and to better understand the concept faking. Adding to the information, schemas for job theory and impression management can be valuable in understanding how applicants

think in this specific position, and then analyze how they respond according to this. As mentioned the data is already gathered, so the job will be to analyze it, to find if there are better predictive validity with ipsative measurements contra normative measurements. SPSS and regression analyses will be used for this purpose.

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Appendix B: Personality Questionnaires of NEO-FFI, IPIP-Likert, and IPIP-MFC

NEO-FFI

All answers are for research purposes only, concerning all experimental conditions.

NEO Fem Faktor Inventorium

Paul T. Costa Jr., Ph. D. og Robert R. McCrae, Ph. D.

LES DETTE FØRST

Dine svar på dette skjemaet vil IKKE bli benyttet ved opptak FOSBS, kun i forskning. Dine personalia vil heller IKKE være tilgjengelig for andre enn forsvarer og må fylles ut på grunn av koding med andre data. Det vil IKKE bli foretatt noen analyser på individnivå. Dine svar og personalia vil bli oppbevart på to ulike steder, og de vil IKKE være tilgjengelige for forskere.

Vær vennlig å lese alle instruksjonene under grundig før du begynner. Marker alle dine svar og skriv bare der du skal. På dette skjemaet kan du skrive navnet ditt eller en kode på den markerte linjen dersom du har blitt bedt om det. Skriv også ned datoen for utfylling, din alder, kjønn, utdanning og yrke.

Spørreskjemaet på de neste sidene inneholder 60 spørsmål. Les hvert spørsmål nøye og sett en ring rundt det svaralternativet som passer best i forhold til om du er enig eller uenig i utsagnet.

Sett et kryss under "SU" dersom utsagnet er helt uriktig eller dersom du er svært uenig. SU U N E SE

Sett et kryss under "U" dersom utsagnet er nok så uriktig eller dersom du er uenig. SU U N E SE

Sett et kryss under "N" dersom utsagnet er omtrent like riktig som uriktig, hvis du ikke kan bestemme deg, eller hvis du er nøytral i forhold til utsagnet. SU U N E SE

Sett et kryss under "E" dersom utsagnet stort sett er riktig eller hvis du er enig. SU U N E SE

Sett et kryss under "SE" dersom utsagnet er helt riktig eller dersom du er svært enig. SU U N E SE

Det er ingen riktige eller gale svar, og du trenger ikke å være en ekspert for å fylle ut spørreskjemaet. Beskriv deg selv på en ærlig måte og uttrykk dine meninger så nøyaktig du kan, men husk og besvar alle spørsmålene/utsagnene.



Kryss av slik:

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T

SU = svært uenig, U = uenig, N = nøytral, E = enig, SE = svært enig

T

	SU	U	N	E	SE
1. Jeg er ikke en person som pleier å bekymre seg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Jeg liker å ha mange mennesker rundt meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Jeg liker å konsentrere meg om en fantasi eller dagdrøm, utforske dens muligheter og la den vokse og utvikle seg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Jeg forsøker å være høflig mot alle jeg møter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Jeg holder mine eiendeler ordentlige og rene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Til tider har jeg følt meg harm og forbittret	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Jeg har lett for å le	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Jeg synes det er interessant å lære og utvikle nye hobbyer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Til tider herser eller smiser jeg med folk for å få dem til å gjøre det jeg vil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Jeg er ganske flink til å tilpasse tempoet slik at jeg får gjort ting i tide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Når jeg er svært stresset, føles det av og til som jeg går i stykker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Jeg foretrekker jobber der jeg kan arbeide alene uten å bli forstyrret av andre mennesker .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Jeg er fascinert av de mønstrene jeg finner i kunst og natur.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Noen mennesker synes at jeg er selvpoptatt og egoistisk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Jeg kommer ofte opp i situasjoner uten å være fullt forberedt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Jeg føler meg sjelden ensom eller nedfor .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Jeg liker veldig godt å snakke med folk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Jeg tror at studenter bare blir forvirret og villedet av å høre kontroversielle talere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Hvis noen starter en krangel, er jeg parat til å ta igjen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Jeg forsøker å utføre alle oppgaver jeg blir pålagt på en samvittighetsfull måte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Jeg føler meg ofte anspent og nervøs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Jeg liker å være der det skjer noe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Dikt og poesi har liten eller ingen virkning på meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SU = svært uenig, U = uenig, N = nøytral, E = enig, SE = svært enig

	SU	U	N	E	SE
24. Jeg er bedre enn de fleste mennesker, og jeg vet det.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Jeg har klare mål og arbeider systematisk for å nå dem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Noen ganger føler jeg meg fullstendig verdiløs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Jeg skyr menneskemengder.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Jeg ville ha vansker med bare å la tankene vandre uten kontroll eller styring.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Når jeg er blitt fornærmet, forsøker jeg bare å tilgi og glemme.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Jeg kaster bort mye tid før jeg kommer i gang med arbeidet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Jeg føler meg sjelden redd eller engstelig.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Jeg føler det ofte som om jeg strutter av energi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Jeg registrerer sjelden stemninger eller følelser som ulike omgivelser kan skape.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Jeg pleier å tro det beste om folk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Jeg arbeider hardt for å nå mine mål.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Jeg blir ofte sint over måten folk behandler meg på.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Jeg er en munter, livlig person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Jeg opplever et bredt spekter av stemninger og følelser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Noen mennesker ser på meg som kald og beregnende.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Når jeg forplikter meg til noe, kan en alltid stole på at jeg følger opp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Når noe går galt, blir jeg altfor ofte motløs og får lyst til å gi opp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Jeg har ikke særlig glede av å småprate med folk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Noen ganger når jeg leser dikt eller ser et kunstverk, føler jeg en gysning eller en bølge av begeistring.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Jeg er nøktern og usentimental i mine holdninger.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Noen ganger er jeg ikke så pålitelig eller til å stole på som jeg burde være.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Jeg er sjelden trist eller deprimert.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

T SU = svært uenig, U = uenig, N = nøytral, E = enig, SE = svært enig T

	SU	U	N	E	SE
47. Livet mitt er hektisk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Jeg er lite interessert i å spekulere over universets natur eller menneskets vilkår.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Jeg forsøker som regel å være omtenkstom og hensynsfull.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Jeg er en produktiv person som alltid får arbeidet unna.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Jeg føler meg ofte hjelpeløs og ønsker at andre skal løse problemene mine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Jeg er en svært aktiv person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Jeg har mye intellektuell nysgjerrighet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Hvis jeg ikke liker folk, lar jeg dem få vite det.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Det virker som om jeg aldri greier å organisere meg selv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. Til tider har jeg vært så skamfull at jeg bare har ønsket å gjemme meg.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. Jeg vil heller gå mine egne veier enn å være en leder for andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. Jeg liker ofte å leke med teorier eller abstrakte ideer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. Om nødvendig er jeg villig til å manipulere folk for å få det som jeg vil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. Jeg streber etter å gjøre det utmerket i alt jeg gjør.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IPIP-MFC

Control Group

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Selection Group

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Warning Group

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Les dette først

På de følgende gruppene av utsagn skal du velge to av utsagnene for hver gruppe på fire utsagn. Det ene valget skal være det utsagnet som beskriver deg best og det andre skal være det som beskriver deg dårligst. Hvis du for eksempel synes at " liker å tenke på ting" beskriver deg best i den første gruppen av utsagn, velger du dette som den beste beskrivelsen av deg og setter et kryss i ruten som markerer at dette beskriver deg best. Hvis du for eksempel synes at utsagnet " vet hvordan man trøster andre" beskriver deg minst, så velger du dette som det andre alternativet og setter ett kryss i ruten som markerer at dette passer deg dårligst. De andre to utsagnene kan du da ikke velge og du må så gå videre til neste gruppe av 4 utsagn og gjøre to nye valg. For hver gruppe av utsagn må du altså velge to utsagn, ett som beskriver deg dårligst og ett annet som beskriver deg best, og deretter gå videre til neste gruppe av spørsmål. **Du skal altså sette to kryss for hver gruppe på fire spørsmål. Er det vanskelig å ta stilling til utsagnene så må du velge de som likevel passer best og dårligst.**

Sett ett kryss for det utsagnet som passer best som beskrivelse på deg og ett annet kryss for det utsagnet som passer dårligst som beskrivelse av deg for hver gruppe på 4 utsagn.		<i>Passer best</i>	<i>Passer dårligst</i>
1.	Blir lett irritert.	<input type="checkbox"/>	<input type="checkbox"/>
	Har lite å si.	<input type="checkbox"/>	<input type="checkbox"/>
	Liker å tenke på ting.	<input type="checkbox"/>	<input type="checkbox"/>
	Vet hvordan man trøster andre.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Kritiserer andres feil og mangler.	<input type="checkbox"/>	<input type="checkbox"/>
	Bruker lite tid og krefter på arbeidet mitt.	<input type="checkbox"/>	<input type="checkbox"/>
	Er i stand til å finne ut ting på egen hånd.	<input type="checkbox"/>	<input type="checkbox"/>
	Blir ikke lett frustrert.	<input type="checkbox"/>	<input type="checkbox"/>

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Ett kryss for det utsagnet som passer best som beskrivelse på deg og ett annet kryss for det utsagnet som passer dårligst som beskrivelse av deg.	<i>Passer best</i>	<i>Passer dårligst</i>
3. Unngår øyekontakt med andre.	<input type="checkbox"/>	<input type="checkbox"/>
Utnytter andre mennesker.	<input type="checkbox"/>	<input type="checkbox"/>
Er kravstor i arbeidet mitt.	<input type="checkbox"/>	<input type="checkbox"/>
Tar ting som de kommer.	<input type="checkbox"/>	<input type="checkbox"/>
4. Er ikke interessert i abstrakte ideer.	<input type="checkbox"/>	<input type="checkbox"/>
Blir overveldet av begivenheter.	<input type="checkbox"/>	<input type="checkbox"/>
Tar godt vare på eiendelene mine.	<input type="checkbox"/>	<input type="checkbox"/>
Prøver å lede andre.	<input type="checkbox"/>	<input type="checkbox"/>
5. Liker ikke å gå på kunstmuseer.	<input type="checkbox"/>	<input type="checkbox"/>
Legger ofte planer i siste liten.	<input type="checkbox"/>	<input type="checkbox"/>
Har lett for å uttrykke meg.	<input type="checkbox"/>	<input type="checkbox"/>
Gir komplimenter.	<input type="checkbox"/>	<input type="checkbox"/>
6. Kommer ofte for sent på jobb.	<input type="checkbox"/>	<input type="checkbox"/>
Fornærmer folk.	<input type="checkbox"/>	<input type="checkbox"/>
Tåler kritikk.	<input type="checkbox"/>	<input type="checkbox"/>
Snakker med mange forskjellige folk på fester.	<input type="checkbox"/>	<input type="checkbox"/>

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Ett kryss for det utsagnet som passer best som beskrivelse på deg og ett annet kryss for det utsagnet som passer dårligst som beskrivelse av deg.	<i>Passer best</i>	<i>Passer dårligst</i>
7. Synes det er vanskelig å ta kontakt med andre.	<input type="checkbox"/>	<input type="checkbox"/>
Kaster meg ut i ting uten å tenke meg om.	<input type="checkbox"/>	<input type="checkbox"/>
Er godt orientert.	<input type="checkbox"/>	<input type="checkbox"/>
Får andre til å føle seg vel.	<input type="checkbox"/>	<input type="checkbox"/>
8. Gjennomfører ikke ting.	<input type="checkbox"/>	<input type="checkbox"/>
Gjør et nummer ut av alt mulig.	<input type="checkbox"/>	<input type="checkbox"/>
Er full av ideer.	<input type="checkbox"/>	<input type="checkbox"/>
Innleder samtaler	<input type="checkbox"/>	<input type="checkbox"/>
9. Blir lett uroet.	<input type="checkbox"/>	<input type="checkbox"/>
Sier lite.	<input type="checkbox"/>	<input type="checkbox"/>
Er trofast mot gamle venner.	<input type="checkbox"/>	<input type="checkbox"/>
Jeg setter alltid i gang med det samme.	<input type="checkbox"/>	<input type="checkbox"/>
10 Klarer ikke å hevde meg.	<input type="checkbox"/>	<input type="checkbox"/>
Glemmer ofte ting.	<input type="checkbox"/>	<input type="checkbox"/>
Forstår raskt hva ting dreier seg om.	<input type="checkbox"/>	<input type="checkbox"/>
Forholder meg rolig under press.	<input type="checkbox"/>	<input type="checkbox"/>

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Ett kryss for det utsagnet som passer best som beskrivelse på deg og ett annet kryss for det utsagnet som passer dårligst som beskrivelse av deg.		<i>Passer best</i>	<i>Passer dårligst</i>
11	Dveler ved fortiden.	<input type="checkbox"/>	<input type="checkbox"/>
	Leter sjelden etter en dypere mening med ting.	<input type="checkbox"/>	<input type="checkbox"/>
	Står på god fot med nesten alle.	<input type="checkbox"/>	<input type="checkbox"/>
	Er åpen om meg selv overfor andre.	<input type="checkbox"/>	<input type="checkbox"/>
12	Unngår å lese vanskelige tekster.	<input type="checkbox"/>	<input type="checkbox"/>
	Føler meg vel bare blant venner.	<input type="checkbox"/>	<input type="checkbox"/>
	Tror at andre mennesker har gode hensikter.	<input type="checkbox"/>	<input type="checkbox"/>
	Lager lister over gjøremål.	<input type="checkbox"/>	<input type="checkbox"/>
13	Bryr meg ikke om andres behov.	<input type="checkbox"/>	<input type="checkbox"/>
	Gjør ting i siste liten.	<input type="checkbox"/>	<input type="checkbox"/>
	Formulerer tanker tydelig.	<input type="checkbox"/>	<input type="checkbox"/>
	Forsvarer meg selv.	<input type="checkbox"/>	<input type="checkbox"/>
14	Ser ned på enhver svakhet.	<input type="checkbox"/>	<input type="checkbox"/>
	Blir lett fornærmet.	<input type="checkbox"/>	<input type="checkbox"/>
	Har et stort ordforråd.	<input type="checkbox"/>	<input type="checkbox"/>
	Vil at alle detaljer skal bli ivarettatt.	<input type="checkbox"/>	<input type="checkbox"/>

T**T**

Ett kryss for det utsagnet som passer best som beskrivelse på deg og ett annet kryss for det utsagnet som passer dårligst som beskrivelse av deg.		<i>Passer best</i>	<i>Passer dårligst</i>
15	Har ikke god fantasi.	<input type="checkbox"/>	<input type="checkbox"/>
	Fokuserer ikke på oppgaven jeg holder på med.	<input type="checkbox"/>	<input type="checkbox"/>
	Holder hodet kaldt.	<input type="checkbox"/>	<input type="checkbox"/>
	Elsker barn.	<input type="checkbox"/>	<input type="checkbox"/>
16	Er ute etter egen vinning.	<input type="checkbox"/>	<input type="checkbox"/>
	Liker ikke kunst.	<input type="checkbox"/>	<input type="checkbox"/>
	Føler meg vel blant andre folk.	<input type="checkbox"/>	<input type="checkbox"/>
	Legger planer og holder meg til dem.	<input type="checkbox"/>	<input type="checkbox"/>
17	Holder tankene mine for meg selv.	<input type="checkbox"/>	<input type="checkbox"/>
	Bekymrer meg over ting.	<input type="checkbox"/>	<input type="checkbox"/>
	Fullfører det jeg begynner på.	<input type="checkbox"/>	<input type="checkbox"/>
	Elsker å lære nye ting.	<input type="checkbox"/>	<input type="checkbox"/>
18	Blir satt ut av uventede hendelser.	<input type="checkbox"/>	<input type="checkbox"/>
	Vil ikke trenge meg dypt ned i et emne.	<input type="checkbox"/>	<input type="checkbox"/>
	Respekterer andres følelser.	<input type="checkbox"/>	<input type="checkbox"/>
	Arbeider hardt.	<input type="checkbox"/>	<input type="checkbox"/>

IPIP-Likert**Control Group**

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Instruksjon.

I det følgende skal du beskrive dine typiske tilbøyeligheter; altså skal du beskrive deg slik du typisk oppfatter deg selv i ulike situasjoner. Det finnes ikke gale eller riktige svar på spørsmålene. Når du svarer kan du spørre deg om i hvilken grad spørsmålene er korrekte eller ukorrekte beskrivelser av dine typiske og vedvarende tilbøyeligheter. Tenk: i hvilken grad er dette korrekte eller ukorrekte beskrivelser av meg? **Sett ett kryss for hvert utsagn/spørsmål. Besvar alle spørsmålene.**

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	1= Svært ukorrekt om meg 2= Ukorrekt om meg 3= Nokså ukorrekt om meg 4= Nokså korrekt om meg 5= Korrekt om meg 6= Svært korrekt om meg					
	1	2	3	4	5	6
1. Kan overtale andre til å gjøre ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Klarer ikke å hevde meg.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Blir lett uroet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Unngår folkemengder.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Er ikke interessert i abstrakte ideer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Forstår raskt hva ting dreier seg om.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Tåler kritikk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Holder hodet kaldt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Tror at andre mennesker har gode hensikter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Legger ofte planer i siste liten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Sier ja til nesten alle forespørsler.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Vil ikke fordype meg grundig i et emne.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Har et stort ordforråd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Kaster meg ut i ting uten å tenke meg om.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Utnytte andre mennesker.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	1= Svært ukorrekt om meg 2= Ukorrekt om meg 3= Nokslå ukorrekt om meg 4= Nokslå korrekt om meg 5= Korrekt om meg 6= Svært korrekt om meg					
	1	2	3	4	5	6
16. Respektere andres følelser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Er god til å presentere ting på spørket.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Innleder samtaler.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Jeg setter alltid i gang med det samme.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Blir sjelden sentimental.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Forteller andre rett ut hva jeg virkelig mener.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Leter sjelden etter en dypere mening med ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Heier høylydt ved sportsbegivenheter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Har utmerkete ideer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Elsker å finne på nye måter å gjøre ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Blir ikke lett frustrert.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Er ute etter egen vinning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Takler en god del stress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Vil gjøre hva som helst for andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Unngår øyekontakt med andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Vil at alt skal være " helt perfekt" .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Er i stand til å finne ut ting på egen hånd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Sier lite.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Klager sjelden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Legger planer og holder meg til dem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	1	2	3	4	5	6
36. Tar ting som de kommer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Synes det er vanskelig å ta kontakt med andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Prøver å lede andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Er åpen om meg selv overfor andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Er lett å gjøre tilfreds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Kan takle store mengder informasjon.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Forutser hva som er andres behov.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Gir komplimenter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Fullfører det jeg begynner på.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Er avslappet det meste av tiden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Tenker først på andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Gjør ting i logisk rekkefølge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Har lett for å forstå ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Bekymrer meg over ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Blir aldri rasende.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Gjør meg stor umåke for andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Blir ikke lett distraheret.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Kommer ofte for sent på jobb.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Kommer overens med de fleste mennesker.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Blir overveldet av begivenheter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	61= Svært ukorrekt om meg 2= Ukorrekt om meg 3= Nokslå ukorrekt om meg 4= Nokslå korrekt om meg 5= Korrekt om meg 6=Svært korrekt om meg					
	1	2	3	4	5	6
96. Får andre til å føle seg vel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97. Kritiserer andres feil og mangler.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98. Vil at alle detaljer skal bli ivaretatt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99. Vet hvordan man trøster andre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100. Gjennomfører planene mine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101. Holder tankene mine for meg selv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102. Liker å tenke på ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103. Ser ned på enhver svakhet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104. Er alltid punktlig.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105. Unngår å gjøre feil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106. Tar godt vare på eiendelene mine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107. Gjør ting i siste liten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108. Arbeider hardt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
119. Bli satt ut av uventede hendelser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110. Er alltid på farten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111. Bli sjelden irritert.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
112. Stiller spørsmål ingen andre stiller.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
113. Er kravstor i arbeidet mitt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
114. Forholder meg rolig selv i spente situasjoner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
115. Bruker tid på å reflektere over ting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Appendix C: SPSS Output of MANOVA and Planned Contrast Comparison

MANOVA for IPIP-Likert

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.601	332.570 ^b	5.000	1106.000	.000	.601
	Wilks' Lambda	.399	332.570 ^b	5.000	1106.000	.000	.601
	Hotelling's Trace	1.503	332.570 ^b	5.000	1106.000	.000	.601
	Roy's Largest Root	1.503	332.570 ^b	5.000	1106.000	.000	.601
n	Pillai's Trace	.354	121.133 ^b	5.000	1106.000	.000	.354
	Wilks' Lambda	.646	121.133 ^b	5.000	1106.000	.000	.354
	Hotelling's Trace	.548	121.133 ^b	5.000	1106.000	.000	.354
	Roy's Largest Root	.548	121.133 ^b	5.000	1106.000	.000	.354
e	Pillai's Trace	.344	116.009 ^b	5.000	1106.000	.000	.344
	Wilks' Lambda	.656	116.009 ^b	5.000	1106.000	.000	.344
	Hotelling's Trace	.524	116.009 ^b	5.000	1106.000	.000	.344
	Roy's Largest Root	.524	116.009 ^b	5.000	1106.000	.000	.344
o	Pillai's Trace	.525	244.016 ^b	5.000	1106.000	.000	.525
	Wilks' Lambda	.475	244.016 ^b	5.000	1106.000	.000	.525
	Hotelling's Trace	1.103	244.016 ^b	5.000	1106.000	.000	.525
	Roy's Largest Root	1.103	244.016 ^b	5.000	1106.000	.000	.525
a	Pillai's Trace	.363	126.030 ^b	5.000	1106.000	.000	.363
	Wilks' Lambda	.637	126.030 ^b	5.000	1106.000	.000	.363
	Hotelling's Trace	.570	126.030 ^b	5.000	1106.000	.000	.363
	Roy's Largest Root	.570	126.030 ^b	5.000	1106.000	.000	.363
c	Pillai's Trace	.519	238.649 ^b	5.000	1106.000	.000	.519
	Wilks' Lambda	.481	238.649 ^b	5.000	1106.000	.000	.519
	Hotelling's Trace	1.079	238.649 ^b	5.000	1106.000	.000	.519
	Roy's Largest Root	1.079	238.649 ^b	5.000	1106.000	.000	.519
ekspmanip	Pillai's Trace	.037	4.223	10.000	2214.000	.000	.019
	Wilks' Lambda	.963	4.243 ^b	10.000	2212.000	.000	.019
	Hotelling's Trace	.039	4.262	10.000	2210.000	.000	.019
	Roy's Largest Root	.034	7.522 ^c	5.000	1107.000	.000	.033

a. Design: Intercept + n + e + o + a + c + ekspmanip

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

MANOVA IPIP-MFC

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.549	255.194 ^b	5.000	1050.000	.000	.549
	Wilks' Lambda	.451	255.194 ^b	5.000	1050.000	.000	.549
	Hotelling's Trace	1.215	255.194 ^b	5.000	1050.000	.000	.549
	Roy's Largest Root	1.215	255.194 ^b	5.000	1050.000	.000	.549
n	Pillai's Trace	.152	37.509 ^b	5.000	1050.000	.000	.152
	Wilks' Lambda	.848	37.509 ^b	5.000	1050.000	.000	.152
	Hotelling's Trace	.179	37.509 ^b	5.000	1050.000	.000	.152
	Roy's Largest Root	.179	37.509 ^b	5.000	1050.000	.000	.152
e	Pillai's Trace	.233	63.949 ^b	5.000	1050.000	.000	.233
	Wilks' Lambda	.767	63.949 ^b	5.000	1050.000	.000	.233
	Hotelling's Trace	.305	63.949 ^b	5.000	1050.000	.000	.233
	Roy's Largest Root	.305	63.949 ^b	5.000	1050.000	.000	.233
o	Pillai's Trace	.239	66.068 ^b	5.000	1050.000	.000	.239
	Wilks' Lambda	.761	66.068 ^b	5.000	1050.000	.000	.239
	Hotelling's Trace	.315	66.068 ^b	5.000	1050.000	.000	.239
	Roy's Largest Root	.315	66.068 ^b	5.000	1050.000	.000	.239
a	Pillai's Trace	.163	40.905 ^b	5.000	1050.000	.000	.163
	Wilks' Lambda	.837	40.905 ^b	5.000	1050.000	.000	.163
	Hotelling's Trace	.195	40.905 ^b	5.000	1050.000	.000	.163
	Roy's Largest Root	.195	40.905 ^b	5.000	1050.000	.000	.163
c	Pillai's Trace	.387	132.464 ^b	5.000	1050.000	.000	.387
	Wilks' Lambda	.613	132.464 ^b	5.000	1050.000	.000	.387
	Hotelling's Trace	.631	132.464 ^b	5.000	1050.000	.000	.387
	Roy's Largest Root	.631	132.464 ^b	5.000	1050.000	.000	.387
ekspmanip	Pillai's Trace	.043	4.587	10.000	2102.000	.000	.021
	Wilks' Lambda	.957	4.620 ^b	10.000	2100.000	.000	.022
	Hotelling's Trace	.044	4.653	10.000	2098.000	.000	.022
	Roy's Largest Root	.041	8.671 ^c	5.000	1051.000	.000	.040

Planned contrast comparison for IPIP-Likert between experimental manipulations 1 and 2

Contrast Coefficients

Contrast	eksmanip		
	control	selection	warning
1	1	-1	0

Contrast Tests

			Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
SnittPIPn	Assume equal variances	1		-.1073	.03464	-3.099	1119	.002
	Does not assume equal variances	1		-.1073	.03532	-3.039	747.953	.002
SnittPIPE	Assume equal variances	1		-.1042	.04069	-2.561	1119	.011
	Does not assume equal variances	1		-.1042	.03985	-2.615	747.944	.009
SnittPIPO	Assume equal variances	1		-.1060	.03753	-2.825	1120	.005
	Does not assume equal variances	1		-.1060	.03732	-2.841	735.781	.005
SnittPIPA	Assume equal variances	1		-.0760	.03233	-2.351	1117	.019
	Does not assume equal variances	1		-.0760	.03251	-2.337	738.594	.020
SnittPIPC	Assume equal variances	1		-.1543	.03774	-4.088	1119	.000
	Does not assume equal variances	1		-.1543	.03739	-4.126	740.802	.000

Planned contrast comparison for IPIP-MFC between experimental manipulations 1 and 2

Contrast Coefficients

Contrast	eksmanip		
	control	selection	warning
1	1	-1	0

Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
tet_n	Assume equal variances	1	-.4462	.24955	-1.788	1075	.074
	Does not assume equal variances	1	-.4462	.25152	-1.774	713.655	.076
tet_e	Assume equal variances	1	-.2171	.29216	-.743	1071	.458
	Does not assume equal variances	1	-.2171	.29082	-.747	712.469	.456
tet_o	Assume equal variances	1	-.5762	.31214	-1.846	1064	.065
	Does not assume equal variances	1	-.5762	.31359	-1.838	711.792	.067
tet_a	Assume equal variances	1	.2395	.28899	.829	1073	.408
	Does not assume equal variances	1	.2395	.27991	.856	721.603	.393
tet_c	Assume equal variances	1	-.7359	.34658	-2.123	1066	.034
	Does not assume equal variances	1	-.7359	.34958	-2.105	699.395	.036

Planned contrast comparison for IPIP-Likert between experimental manipulations 2 and 3

Contrast Coefficients

Contrast	eksmanip		
	control	selection	warning
1	0	1	-1

Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
SnittIIPN	Assume equal variances	1	.1208	.03464	3.489	1119	.001
	Does not assume equal variances	1	.1208	.03449	3.504	745.532	.000
SnittIPIPE	Assume equal variances	1	.1224	.04069	3.008	1119	.003
	Does not assume equal variances	1	.1224	.04119	2.972	744.065	.003
SnittIPIPO	Assume equal variances	1	.1378	.03751	3.675	1120	.000
	Does not assume equal variances	1	.1378	.03659	3.767	742.723	.000
SnittIPIPA	Assume equal variances	1	.0976	.03237	3.015	1117	.003
	Does not assume equal variances	1	.0976	.03150	3.099	743.560	.002
SnittIPIPC	Assume equal variances	1	.1049	.03774	2.780	1119	.006
	Does not assume equal variances	1	.1049	.03717	2.822	742.247	.005

Planned contrast comparison for IPIP-MFC between experimental manipulations 2 and 3

Contrast Coefficients

Contrast	eksmanip		
	control	selection	warning
1	0	1	-1

Contrast Tests

Contrast			Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
tet_n	Assume equal variances	1	.7294	.24990	2.919	1075	.004
	Does not assume equal variances	1	.7294	.24404	2.989	716.844	.003
tet_e	Assume equal variances	1	.6582	.29405	2.238	1071	.025
	Does not assume equal variances	1	.6582	.28788	2.286	704.461	.023
tet_o	Assume equal variances	1	.7771	.31394	2.475	1064	.013
	Does not assume equal variances	1	.7771	.30810	2.522	706.129	.012
tet_a	Assume equal variances	1	.2579	.29003	.889	1073	.374
	Does not assume equal variances	1	.2579	.29528	.873	704.902	.383
tet_c	Assume equal variances	1	.4254	.34884	1.220	1066	.223
	Does not assume equal variances	1	.4254	.33439	1.272	702.690	.204