Liar, Liar, Slacks on Fire

Levels of Self-Esteem as Antecedents of Deception on LinkedIn

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Abstract

The current study investigates the relationship of self-esteem and deception on LinkedIn. Previous research pointed in multiple directions linking self-esteem to deception and questioning the causality. First, participants’ \((N = 90)\) state self-esteem was manipulated using fake personality test outcomes. Participants were then asked to apply for a fictional job by filling in a mock LinkedIn profile. State and trait self-esteem were tested for an effect on deception in the mock profiles. Afterwards, the relationship of trait self-esteem and participants’ real LinkedIn profiles was tested. A significant effect of state self-esteem on deception in the mock profiles was found. However, no significant effect was found for the relationship of trait self-esteem on deception in either the mock or real LinkedIn profiles.
Introduction

While most fundamental aspects of human behavior are accepted in society, some are met with skepticism and even head-shaking. One example is deception, a widespread aspect of human interaction (Hilbig & Thielmann, 2019). According to Abe (2011), deception is “a psychological process by which one individual deliberately attempts to convince another person to accept as true what the liar knows to be false, typically for the liar, or sometimes for others, to gain some type of benefit or to avoid loss”. People deceive in one way or another (Guillory & Hancock, 2002). Some lies take the form of disguise, forgery, financial fraud and scams, even feints and ploys in games and sports (Abe, 2011). But why do people lie in the first place? Deception boils down to be a means to achieve a (maybe otherwise unattainable) goal (Guillory & Hancock, 2002). According to Caspi and Gorsky (2016) people lie most often about their feelings, actions, plans and whereabouts, and their achievements and knowledge. In line with its ordinary nature, however, deception does not always translate into harmful lies. White lies, for example, are used by most people on a daily basis, often for altruistic reasons, such as preventing harm or hurt in another person (Abe, 2011). Agosta, Pezzoli, and Sartori (2013) go as far as stating that white lies should not even be grouped with ‘real’ lies as they yield no harm to others. Dishonesty can be a slippery slope and, as previously established, takes many forms. It is exaggerating one’s language skills when there is no one present to disprove the statement, telling a far more adventurous story about the last vacation when it really was merely spent in a hotel or presenting oneself more favorably on social networking sites.

One popular social networking site (SNS) that, as do all, bears the risks of over-favorable self-presentation is LinkedIn. With its nearly 660+ million unique users worldwide, LinkedIn is the world’s leading professional SNS ("About LinkedIn", 2019). In fact, individuals can use LinkedIn not only for building networks and connecting to colleagues but even apply for their next job with only a few clicks. Conveniently, LinkedIn asks for a resume-like profile. CVs may also be uploaded and added to one’s LinkedIn profile making it even easier to use the Network’s One Click-Application. In one study, Guillory and Hancock (2002) found out that due to the absence of verbal and/or non-verbal cues in social media, people are more inclined to lie. In their 2011 study, Cornwell and Lundgern found that 17.5% of participants using internet profiles have misrepresented their background, constituted of occupation and education among other variables. The advantage gained by framing one’s qualities in an excessively positive way has long been acknowledged (Moshagen and Müller, 2019). In our fast-paced world where one CV may be viewed as superior to another based on a job title,
some people depend on making an impression that wows. In a study conducted during the early 2000s, Guillory and Hancock (2002) reported up to 90 percent of individuals admitting to lying on a resume-like scholarship application (George, Marett & Tilley, 2004) and 43% of evaluated resumes containing self-enhancing inaccuracies. Padding one’s resume with dishonest data appears to become an increasingly common practice. This mostly aims at competing more successfully with other applicants. However, patting oneself on the shoulder and over-emphasizing positive attributes may derive from and also establish a more positive self-image (Brown & Taylor, 1988).

One prominent motivator that will hereby be focused on is the achievement of favorable self-presentation. Brown and Taylor (1988), as cited in a number of current studies, stated that overly positive, inaccurate self-perceptions, which they termed positive illusions, contribute to adaptation and positive mental health. These white lies may therefore be applied in trying to bridge the gap between who one is and who one wants to be. The decision to engage or not to engage in deception is influenced by the perceived need for dishonesty in achieving the goal at hand. In this context, self-esteem plays an important role, as this is the sum of an individual’s thoughts, feelings and evaluations toward themselves. Self-esteem is commonly divided into distinct theoretical entities. According to Brown and Marshall (2006), the distinction is between trait self-esteem and state self-esteem. Trait self-esteem, otherwise called global self-esteem, refers to general feelings about oneself. These are relatively stable overtime and even contain a probable genetic component. State self-esteem, or feelings of self-worth, depend on situational factors and valenced events that may either boost or lower one’s perceived feelings of self-worth (state self-esteem). Heatherton and Polivy (1991) further divide state self-esteem into three dimensions: performance self-esteem, social self-esteem and appearance self-esteem.

The aim of the current study was to investigate the relationship between the level of self-esteem people experience and the prevalence of lies in their LinkedIn profiles. Based on the previously discussed research findings, the formulated research question is:

“What relationship exists between the level of self-esteem people experience and the lies in their LinkedIn profiles?”

A study by Haynes, Peterson, and Olson (2008) showed that high self-esteem people think positively of themselves and are primarily motivated to demonstrate their abilities. Low self-esteem people, On the other hand, think poorly of themselves and are primarily motivated to avoid failures. They further explained individual differences in deceptive behavior with
cognitive dissonance: “Individuals with low self-esteem will experience less dissonance than individuals with high self-esteem in situations that usually arouse dissonance, because persons with a negative self-concept perceive less discrepancy between their negative or undesirable behavior and their expectations for themselves” (Haynes et al., 2008). As a logical conclusion, one may assume that people with low self-esteem will be less inhibited when deceiving, resulting in a higher prevalence. However, Haynes et al. (2008) go on to discuss self-affirmation in people with high self-esteem as a buffer to deal with the experienced dissonance. According to this finding, people with high self-esteem are more readily able to draw on self-affirming beliefs and positive attributes, which in turn results in more resilience in the face of threats to one’s self-esteem.

In order to investigate the link of self-esteem and deceptive behavior on LinkedIn, the following hypotheses were drawn up:

*Hypothesis 1:* State self-esteem has an effect on individual’s deception on LinkedIn.
*Hypothesis 2:* Trait self-esteem has an effect on individual’s deception on LinkedIn.
Method

Design

The research was conducted through an online survey tool allowing for efficient recruitment of a random sample. A between-groups design dividing subjects into two groups was employed. The groups were called Low Self-Esteem and High Self-Esteem. Accordingly, the independent variable in the study the manipulation of self-esteem. State and trait self-esteem measurements were conducted. Deception was the dependent variable. This variable will be referred to as “deceptive behavior” in the remainder of this paper.

Participants

The study was shared via the University of Twente’s SONA system. Given that the tool aims at recruiting students, participants were granted half a credit for participation. One additional incentive for participation was a €50-voucher granted to one participant identified as the “best applicant”. Apart from SONA, the study was also shared directly to contacts unaffiliated with the University of Twente by mail, these in turn shared it with their contacts and so forth. A total of 100 participants were initially recruited. Of all, 90 subjects completed the survey and provided sufficient data for analyses meaning that the data of 10 participants was omitted. The relevant subjects were aged 18-54 years. 60% of subjects identified as female gendered, 38.9% as male and 1.1% as other. Work experience among the subjects varied from less than two years (57.8%) to more than 5 years (14.4%). 42 participants (46.7%) were allocated to the low self-esteem condition, respectively, the other 48 participants (53.3%) were allocated to the high self-esteem condition.

Materials

The study consisted of total of four questionnaires, the presentation of a fictional job opening, a fictional LinkedIn profile to be filled out and questions measuring deception. Following, each instrument will be described.

Rosenberg Self-Esteem Scale (RSES). The RSES, developed by Morris Rosenberg (1965) is a 10-item questionnaire measuring trait self-esteem, i.e. general feelings an individual holds towards themselves. Items (e.g. On the whole, I am satisfied with myself. and I feel that I’m a person of worth, at least on an equal plane with others.) are answered on a 4-point scale
ranging from Strongly Agree to Strongly Disagree. RSES was scored as follows: Strongly Disagree was given 1 point, Disagree 2 points, Agree 3 points and Strongly Agree 4 points. Items 2, 5, 6, 8 and 9 were reversed. The RSES was chosen for its strong internal consistency and scale reliability as demonstrated by its continuous re-evaluation and wide use and a calculated Cronbach’s alpha of .78.

**State Self-Esteem Scale (SSES).** Heatherton and Polivy’s (1991) SSES is a 20-item questionnaire measuring state self-esteem which translates into one’s feelings and thoughts about oneself at a given point in time. The items are divided into three components: social self-esteem (e.g. *I am worried about whether I am regarded as a success or failure.*), appearance self-esteem (e.g. *I feel satisfied with the way my body looks right now.*) and performance self-esteem (e.g. *I feel confident about my abilities.*). The SSES was used prior and posterior to the manipulation in order to measure two comparable values of state self-esteem per participant. The SSES was scored by giving 1 point for Not At All, 2 points for A Little Bit and so on, Extremely was scored with 5 points, respectively. Items 2, 4, 5, 7, 8, 10, 13, 15, 16, 17, 18, 19 and 20 were reversed. The SSES had a calculated Cronbach’s Alpha of .89 indicating very good reliability.

**BFI-10.** The BFI-10 is a 10-item version of the Big Five Personality Inventory measured on a 5-point scale. While the validated scale demonstrated a good internal consistency, the data were merely used for the purpose of manipulating the IVs, as will be presented in the procedure. Exemplary questions are *I see myself as someone who... is generally trusting or is relaxed, handles stress well.*

**Job Opening.** The fictitious job advertisement that was presented in this study was based off of personal experience and job advertisements found on LinkedIn. The ad contained the title of the position, *Office Help*, a short job description, responsibilities and requirements for the position (Appendix A).

**LinkedIn profile.** A mock LinkedIn profile was created for participants to fill out. This was based on a real LinkedIn profile and contained the following sections for open answers: City/Residential Area, Education, Experience, Skills and Achievements, Personal Interests.

**Deception Question.** In order to measure whether and if so, in what areas participants deceived the following question was posed: *Please indicate which aspects of the LinkedIn profile you just created contain dishonesty, such as exaggerations, essential information missing or lies.* This was answered by ticking up to five checkboxes, each relating to a section in the LinkedIn profile (e.g. *Skills and Achievements*). The possible scores ranged from 0 (no deception) to 5 (deceived in all five possible areas).
Procedure

Upon opening the link to the study, participants were firstly presented with a short introduction to the study and the researcher. In the initial information section, participants were informed that the study dealt with *technological limitations of using LinkedIn when applying for jobs online*. This was followed by a summary of the tasks, specifically: filling in a mock LinkedIn profile and using LinkedIn’s Easy Apply feature to apply for a fictional job. Also, questionnaires preceded and followed the main task. As an incentive for completed participation, participants were promised the lottery of a €50-voucher for an online shop of their choice if they *got the job*. Students from the University of Twente could then enter their SONA-ID in order to be granted credit for participation. The section ended with asking for the participants’ consent.

The next step was measuring trait self-esteem by filling in the RSES which was introduced as a *questionnaire dealing with general feelings about oneself*. Participants indicated their answers to the questions in a matrix table. Further, state self-esteem was measured using the (Pre-)SSES. It was presented and introduced as a questionnaire concerning *thoughts the participants held about themselves at that very moment*. It was emphasized that no answer was right or wrong and that all questions should be answered.

Following the measurements, self-esteem was manipulated. To achieve this, participants were asked to fill in a personality questionnaire, the BFI-10. In order to manipulate self-esteem, participants were given a fictitious personality test outcome (Baker & McNulty, 2013). There was two conditions, low self-esteem and high self-esteem. Participants were randomly assigned to one group. In the low self-esteem condition, participants were led to believe that they did poorly on the test and that they score below average on a number of traits as compared to their peers. Specifically, they were informed that their score can *mean that [they] tend to be more impulsive and less focused than most of [their]peers. [They] can be tense and experience difficulties when being presented with problems which shows in [their] superficial relationships with others*. In the high self-esteem condition, however, participants were presented with the opposite statement, stating that they did very well and exceeded average scores on a number of traits: *This can mean that [they] tend to be more thoughtful and more focused than most of [their] peers. [They] can relax and easily overcome problems which shows in [their] meaningful relationships with others.*
After reading the supposedly calculated outcome of their personality tests, participants were introduced to the part of the study relating directly to LinkedIn. First, a scenario was given in which they should imagine to be looking for a job on the side. They found a job opening for an *Office Help* and then moved on to fill in their LinkedIn profile as this built the foundation of their application. Before filling in the LinkedIn profile, participants are reminded that their data were used with full confidentiality and here, too, there is no right or wrong answer. After filling in their profile, participants applied for the job using LinkedIn’s Easy Apply feature by clicking one button.

Following the application process, participants were asked to fill in the (Post-)SSES. This questionnaire was introduced similarly to the first version, except this time the questions were presented in a different order as to minimize recollection of previous answers to the same questions.

Upon completion of the task, participants were asked to remember the profile they just filled in and indicate which parts of that profile contained *dishonesty, such as exaggerations, essential information missing or lies*. Each one of the 5 parts of the profile were given as a possible answer to be ticked, meaning that scores on this question could range from 0, *no deception*, to 5, *deceived in all of the five areas of the profile*. Then, they were asked if they used LinkedIn in real life. If so, they were redirected to a question asking whether they deceived in their real LinkedIn profile. Again, mentioning all 5 areas of a standard LinkedIn profile with possible scores 0-5.

The last questions dealt with demographic data and asked gender, age, professional work experience and their motivation to *get the job*.

Finishing off, participants were debriefed about the true nature of the study. It was emphasized that the presumed outcome of the BFI-10 was completely fictional and in no way connected to the answers participants gave. After the debriefing, participants were given the opportunity to reconsider their participation and withdraw consent if they wanted. None of the participants withdrew consent after being debriefed. Participants who wished to take part in the lottery could then type in a code and were directed to a second, distinct questionnaire where they could type in their code again and a personal mail-address to be contacted in case they won the lottery.
Results

Descriptive Statistics

**Deception.** Participants deceived on average 0.87 times out of the five possible ways of deceiving (or be honest) in their mock LinkedIn profile ($N = 90, M = 0.87, SD = 0.82$). Of all, participants using LinkedIn in real-life ($N = 33$) deceived on average 0.76 times ($M = 0.76, SD = 0.71$).

**Self-Esteem.** After recoding the reversed items of the scale, a mean trait self-esteem score was computed and kept on a continuous scale. State self-esteem was measured twice, before (*Pre*-) and after (*Post*-) the manipulation; the sum of points translates into the continuous measure of State Self-Esteem.

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Scores for RSES (Trait Self-Esteem), Pre-SSES (State Self-Esteem) and Post-SSES

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<tr>
<th></th>
<th>$N$</th>
<th>$M$ (SD)</th>
<th>$Mdn$</th>
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<tbody>
<tr>
<td>RSES</td>
<td>88</td>
<td>2.25 (.50)</td>
<td>2.30</td>
</tr>
<tr>
<td>Pre-SSES</td>
<td>89</td>
<td>68.78 (12.45)</td>
<td>67.00</td>
</tr>
<tr>
<td>Post-SSES</td>
<td>87</td>
<td>69.46 (12.75)</td>
<td>66.00</td>
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Inferential Statistics

Prior to hypothesis testing, assumptions were checked. The distribution of data provided by both SSES questionnaires was checked and turned out to be not normally distributed.

**Wilcoxon’s Signed-Rank Test.** Given the distribution of the data, Wilcoxon’s Signed-Rank Test was applied in order to check whether the manipulation was successful and affected state self-esteem. The signed-rank test was run for both groups based on the differences in their pre- and post-measurement scores (Table B1). The test resulted in non-significant values for the low self-esteem group ($N = 38, p = .18$), and the high self-esteem group ($N = 48, p = .58$). This means that the manipulation was not successful. The SSES scores showed a wide range, therefore the relationship between continuous SSES scores and deception was investigated.
**Linear Regression.** Two linear regression analyses were conducted. First, it was investigated if there was an effect of state self-esteem on deception in the fictitious profile. The analysis revealed that the observed model was significant ($F(1, 87) = 9.65; p < .05$) with 32% of the dependent variable being potentially explained by the model ($R^2 = .32$). The associated $p$-value of .003 ($B = -0.02, t = -3.11$) for the measurement of pre-manipulation state self-esteem indicates that the null hypothesis cannot be rejected. Thus, changes in state self-esteem are in fact associated with changes to deceptive behavior on LinkedIn, H1 may be accepted.

The second linear regression analysis concerned the potential effect of trait self-esteem on deception in the fictitious profile. The model was non-significant ($B = 0.24, t = 1.36, p = .18$). Therefore, changes in trait self-esteem do not explain the dependent variable, H2 must therefore be rejected.

One additional regression analysis related trait self-esteem to deception in the real-life LinkedIn profile. The analysis, however, resulted in no significant effect ($B = -0.08, t = -.36, p = .73$), meaning that there was no significant effect of trait self-esteem on the real LinkedIn profiles either.

**One-way ANOVA.** In order to investigate possible significant effects within the groups of low and/or high state self-esteem, a One-Way ANOVA was conducted. The ANOVA compared the mean scores for deception in the fictitious LinkedIn profile ($FakeDeception$) across the manipulated groups (low self-esteem and high self-esteem). There was no statistically significant difference in mean score either within or between the groups ($p = .51$).
Discussion

General. The aim of this study was to examine the relationship between levels of self-esteem people experience and their deceptive behavior on LinkedIn. The results pointed out two main findings: state self-esteem did have an effect on deception in the fictitious LinkedIn profile which trait self-esteem, however, did not. Additionally, the relationship of trait self-esteem and deception on participants’ real LinkedIn was investigated. This, too, yielded no significant effect. Lastly, it was revealed that the conducted manipulation was not successful.

The first point of discussion that arose were the different results for the fictitious and real LinkedIn profiles. These can be best explained taking into account the sum of findings of this study. Given that state and trait self-esteem are two distinct concepts, they come with different antecedents and consequences (Brown & Marshall, 2006). Hence, when looking at the two profiles, one must keep in mind that while a change in state self-esteem does influence the decision to deceive, trait self-esteem does not necessarily. Levels of perceived state self-esteem have, among other domains, been linked to performance (Heatherton & Polivy, 1991). Accordingly, it is no surprise that given the task in this study, state self-esteem may have had considerable influence on how participants filled out their profiles. Participants were deliberately asked to apply for a job, therefore inevitably considering their fit for this position and possibly making a judgement about their skills and/or suitability. According to Brown and Marshall (2006), trait self-esteem does not depend on beliefs about one’s performance or social status. In line with this, it did not affect filling in one’s LinkedIn profile – not significantly, anyway.

As for the real profiles, only 33 of all participants reported using LinkedIn in their real life. Hence, the number of participants may not have been sufficient to draw accurate conclusions. It is plausible, that the seldom use of LinkedIn results from most participants still being students as opposed to professionals, therefore not fitting LinkedIn’s target demographic.

Limitations and Recommendations for Future Research. One limitation of the study appeared to be the fictitious LinkedIn profile. Participants filled in the profiles sparsely, indicating that the scenario did not meet the level of reality that it may have needed to reflect participants’ true behavior online. Considering standard CVs as found online, their length and content, as well as the time filling in the entire questionnaire, it was clear that few of the participants took their time in order to fill in the profiles accordingly. A number of participants needed less than 10 minutes while the study was expected to take about 20 minutes, possibly
longer. While the fictitious profile form contained all relevant fields to be filled out, the layout did not differ from the rest of the study. This may have led participants to believe that the profile is a mere test rather than an attempt at measuring real life behavior which in turn justified the sparse answers. This misconception may have been strengthened by the €50-voucher promised to the winning applicant. While this incentive yielded a considerably large sample given the limited time of subject recruitment, it may have undermined the reality of the scenario as well. Participants could therefore easily fill in their profiles according to the job opening and not be held accountable for dishonesty as this was, of course, an anonymous test. As a result, for future research it is recommended to design visually congruent fictitious profiles as compared to the true sites that are being investigated. Moreover, a financial incentive may result in a larger sample, however, the framing that the winning applicant will be granted one may mislead participants to frame their answers even more favorably than they would intend to otherwise.

As for content, one recommendation is the use of a different measurement of deceptive behavior. In an attempt to pose a subtle question and provoke as few response biases in the subjects as possible, only one checkbox question for deception was posed per profile. However, when viewing the data (and as shown in the descriptives), most people indicated one area in their profiles they deceived in. This gives a binary indication of whether or not a person lied, it gives no insight, however, into the extent of deception within that area. Meaning that an individual that deceived a fair amount in one area was viewed more honest than a person that would deceive very little in two areas. The question can easily be posed as a scale question which would yield immense additional data to explain the relationship of self-esteem and deception.

**Conclusion.** The findings of this study answered the research questions and shed some light on the relationship of deception and self-esteem. State self-esteem has a significant effect on filling in LinkedIn profiles truthfully while trait self-esteem appears to have no effect at all. This may be explained by the very definition of those two forms of self-esteem with state self-esteem relating heavily to feelings of self-worth as experience through social standing or performance, while trait self-esteem is the global image a person holds about themselves, relatively stable across time. The irony of deception as a fundamental yet often disliked part of human behavior remains what makes it difficult but certainly worthwhile exploring.
References


Appendix A

Job opening as used in the manipulation

The following part will be about the given job opening and your Linkedin profile.

Imagine you are looking for a job on the side. While searching the internet you stumble upon an interesting job opening posted by a widely known medium-sized company.

Please read the job opening carefully and fill out your Linkedin profile as instructed.

Job Description

We are looking for a responsible, part-time Office Help to perform a variety of administrative tasks. Duties of the Help include assisting in occasional office needs our company’s general administrative activities.

Responsibilities

- Order office supplies and research new deals
- Maintain contact lists
- Book travel arrangements
- Act as the point of contact for internal and external requests
- (…)

Requirements

- Proficiency in MS Office
- Organizational skills with the ability to multi-task
- High School degree; additional qualification as an Administrative assistant or Secretary will be a plus
- (…)


Appendix B

Table B1

*Wilcoxon’s Signed-Rank Test performed Pre and Post Measure of State Self-Esteem for Groups Low and High SSE*

<table>
<thead>
<tr>
<th></th>
<th>Negative Ranks</th>
<th>Positive Ranks</th>
<th>Ties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>Sum</td>
</tr>
<tr>
<td>Post SSES – Pre SSES (Low)</td>
<td>15</td>
<td>17.53</td>
<td>263.00</td>
</tr>
<tr>
<td>Post SSE – Pre SSES (High)</td>
<td>18</td>
<td>26.06</td>
<td>469.00</td>
</tr>
</tbody>
</table>