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A Bystander Situation from the Perpetrator's Perspective: Do Bystanders Influence the Occurrence of Prosocial or Pro-Self Lying?

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EFFECT OF BYSTANDERS ON PROSOCIAL OR PRO-SELF LYING

Abstract

The bystander effect is a common phenomenon which has widely been analyzed. The effect bystanders have on the perpetrator has nevertheless been neglected. Therefore, the current study aims to gain further insight on the influence of bystanders on the perpetrator. This was applied on the example of lying. By means of a 2x2 design participants were randomly assigned to either the bystander or non-bystander condition and had the possibility to earn money either for themselves or for charity purpose. They were told that the money they earned was dependent on their score on a specific task which was used as a pretext. Based on literature we hypothesized that people are less likely to lie in the presence of bystanders compared to those being alone (H1). Furthermore, we expected them to lie in the presence of bystanders if the goal was a prosocial one compared to when they are alone and the goal is a pro-self one (H2). Apart from that we expected guilt and shame to be experienced and hypothesized that it will be highest when people lie for a pro-self goal compared to a prosocial one and when they are in the presence of bystanders compared to being alone (H3). Additionally, we expected self-efficacy to have a crucial impact on people's behavior and hypothesized that people who score high on self-efficacy tend to lie in the presence of others compared to those who score low on it (H4). The findings did not show a statistical significance and did therefore not allow to draw a conclusion. This may be caused by the fact that the incentive was too low and therefore only a minority of the participants lied.

A Bystander Situation from the Perpetrator's Perspective:
Do Bystanders influence the Occurrence of Prosocial or Pro-Self Lying?

The following situation may evoke familiarity by most people: A friend asks for your opinion about her new dress. Although you find it horrible you tell how beautiful it looks on her. Since all her family is around you did not dare to tell her the truth. That you lied to her is not an exception. Research suggests that people lie relatively often in their everyday life: Every person tells a lie in one out of five interactions a day (Tosone, 2006). The decision to lie is made individually and depends on several factors (Saxe, 1991). We assume that the presence of other people may be an important factor for lying behavior to occur as in the mentioned example. A lot of research has since been conducted to explore the effects of bystanders when it comes to helping behavior (Fischer, Krueger, Greitemeyer, Vogrinic, Kastenmüller, & Frey, 2011). However, the influence of bystanders on the behavior of the perpetrator has widely been neglected. To further investigate this field of research we built up a lab study which aims to assess whether people lie in the presence of others or not and if it makes a difference if the goal of the lie is pro-self or prosocial.

Lying for Yourself and for Others

Lying, which is physically described as the intentional inhibition of a truthful response (Verschuere, Spruyt, Meijer, & Otgaar, 2011), can be separated into two fields. Those are pro-self and prosocial lying. They differ from each other by means of the planned beneficiary of the lie. Whereas the former type aims to benefit the person him- or herself, the latter one only benefits others (Steinel, Utz, & Koning, 2010). Based on this distribution people never judge lying equally. As people lie every day they evaluate their fraud based on their individual circumstances (Ennis, 2008).

The motives which are said to trigger pro-self lying are various and differ between individuals. Nevertheless, there are several factors which are said to have an impact on pro-self lying. Research suggests for instance that a stressful situation is more likely to evoke lying because most people try to prevent a conflict which might result from those pressure evoking situations. Furthermore, an external reward displays a high motivation for most people to adopt pro-self lying. It makes them discard their personal morals to receive the reward and thereby benefit personally (Grover & Hui, 2005). In general, it became obvious that pro-self lying is becoming more and more common (Steinel et al., 2010).

Although we are taught to act truthfully in social interactions from young age on, not all lying is reprehensible. Lies are generally evaluated and judged differently based on their

purpose. Sometimes it would be even advisable not to tell the truth in social interactions in order to protect someone from harm (Popliger, Talwar, & Crossman, 2011). This is an example for prosocial lying which is said to be the most reasonable type of lying. Generally, as soon as the lie is selfless and intended to benefit others it is assumed to be prosocial (Steinel et al., 2010). Although lying can sometimes be seen as morally justifiable we consider it as a criminal act within the scope of this research since it often includes a norm violation and can still reasonably be applied within research.

Routine Activity Theory

In order to explore the influence of bystanders on the perpetrator it is helpful to first explain those factors which make a criminal act take place. Research suggests that a specific structure of environmental elements is necessary. The so called Routine Activity Theory (RAT) states that three elements need to be met: This is firstly a motivated perpetrator who both has the criminal tendency as well as the abilities to implement those tendencies. Secondly, someone or something displaying a convenient target and thirdly the absence of bystanders, or guardians, as named in this context, who would be capable of interfering. It is argued that the absence of only one of those factors is already satisfactory to avert the successful fulfilment of a crime (Cohen & Felson, 1979). Based on the ‘Routine Activity Theory’ we therefore hypothesize the following for the current study:

Hypothesis 1: People are less likely to lie in the presence of bystanders compared to those being alone.

Beside the aim to investigate the influence of other people on lying we want to assess if it makes a difference if people either lie for their own advantage or for others (pro-self/prosocial lying). According to the Routine Activity Theory people will lie less in the presence of bystanders. However, we argue that, in certain situations, they may even lie more. In the next section, we will provide reasoning for this line of thinking.

Prosocial Lying

Most people might be familiar with the saying ‘The end justifies the means’. It says that a norm violation is judged differently depending on its purpose. Within research, this is known as the Robin Hood Effect. It states that if the outcome of a norm violation benefits others, observers will respond more approvingly to the violation. Instead, a norm violation for the own benefit does not offer any of those advantages because the social environment is harmed (van Kleef, Homan, Finkenauer, Blaker & Heerdink, 2012).

There is another theory which supports the assumption that people may lie more in specific situations. This is the theory of Competitive Altruism. Altruism generally describes

the purpose to favor others at one's own costs. Competitive Altruism gives an explanation for this apparently selfless behavior: Hardy and van Vugt (2006) suggest that being perceived as selfless and generous implies several benefits on the long-term. People who act altruistically namely display appealing interaction partners based on several attributed personality traits as for example power or resource control (Smith & Bird, 2000). Acting altruistically in public therefore improves their reputation and status (Olsen, 1965). All in all, altruists are likely to compensate their expenses made on the long-term which explains why they choose for this course of action (Roberts, 1998). For Competitive Altruism to appear numerous circumstances must be met. One of those is that the behavior needs to be expensive to display which means that the person in question needs to take a certain risk to socially benefit from that behavior (Hardy & van Vugt, 2006). According to Hardy and van Vugt (2006), increasing expenses to perform an altruistic behavior also predicted an increasing benefit for status which proposes that bystanders are very conscious of this information. In regard of the above-mentioned theories we hypothesize the following:

Hypothesis 2: People are more likely to lie in the presence of bystanders when the goal of the lie is a prosocial one compared to when they are alone and the goal of the lie is a pro-self one.

Guilt & Shame

It became apparent that lying is a vague field of research because of the indistinct evaluation of lies to be acceptable or not. As guilt and shame are predominantly experienced when social and moral norms are violated, they are closely related to situations where lying behavior is performed. This is especially the case when other people are present (Tangney & Dearing, 2003). The difference between guilt and shame is that shame causes a negative image of the self while guilt describes a negative image of a particular behavior (Amada, 2005). It became apparent that the goal of the lie makes people evaluate the norm violation differently. People may therefore experience more guilt and shame in specific situations which lead us to hypothesize the following:

Hypothesis 3: Shame and guilt are experienced highest when people lie for a pro-self goal compared to a prosocial goal and when they are in the presence of bystanders compared to being alone

Self-Efficacy

According to the Routine Activity Theory, the motivation of the perpetrator has a crucial impact on the perpetration of a criminal act. We expect motivation to be closely related to a person's own belief in his or her abilities and therefore focus on the construct of self-efficacy

as a sub-research question. Former research suggests that self-efficacy has a crucial influence on performance in general. Although there has not been a lot of research conducted about the influence of self-efficacy on crime it is suggested by Brezina and Topalli (2012) that perpetrators might hold similar beliefs about their efficacy related to delinquency.

Established by Bandura (1997), self-efficacy describes the conviction that one has the abilities to complete a task successfully. This belief is influential on the choices an individual makes and the action he or she takes. It is said that people's belief predicts the rate of effort and determination they exercise (Ahlin, 2010). Just as this construct is related to everyday decisions it can equally be applied to the context at hand and determine whether an individual performs actions which interfere with moral principles, as for instance lying. People's behavior may be dependable on earlier experiences with lying. Those who experienced successes through lying will be more likely to perform the same action in research setting based on the experiences made (Brezina & Topalli, 2012).

We argue that a high level of self-efficacy may have a crucial influence on the completion of a crime: The Routine Activity Theory states that, among others, a motivated perpetrator is necessary for a crime to take place. We argue that participants who score high on self-efficacy may be especially motivated to commit a crime. The belief in their abilities may give them a feeling of invulnerability and a negligence of the presence of bystanders. We therefore suggest that an exaggerated motivation to carry out a violation may compensate the presence of bystanders who would be able to interfere. Based on the theory of self-efficacy we expect the following results for the sub-research question: In how far does Self-Efficacy have an influence on lying?

Hypothesis 4: People who score high on self-efficacy are more likely to lie in the presence of bystanders than those who score low on it.

Current Study

To acquire further knowledge in this field of research we have chosen to carry out a lab study to investigate the influence of bystanders on lying. As lying can be counted as a criminal act in the broadest sense and can thereby still be used within the scope of research we have chosen for its application within this study. The participants were either assigned to the bystander- or the non-bystander-condition to examine the influence of observers. Furthermore, we chose to add another condition: All respondents were told to have the possibility to earn money. In one condition, they could earn it for themselves. In the other condition, they were told to earn money which will be used for charity purpose. We were aiming to investigate if, firstly, bystanders have an influence on the occurrence of lying and

secondly, if it makes a difference if the goal of the lie was a prosocial or pro-self one.

Method

Participants

A total of 119 individuals voluntarily participated in this research, 68 females and 51 males. The average age was 21.5 years ($SD = 2.80$). All participants have been randomly assigned to one of the four conditions of this 2 (alone vs. bystanders) x 2 (pro-self vs. prosocial) study. The ethical review board (EC) of the faculty of Behavioral, Management and Social Sciences (BMS) of the University of Twente (UT) approved the design and setup of this study and gave their agreement for the implementation. Prior to completing any questionnaires, participants agreed about their participation and the mentioned conditions with an informed consent form. They had the possibility to withdraw their consent at any moment. At the end of the study, participants were fully debriefed and thanked for their participation. They were eligible to win €2,50,- (roughly \$2,70,- in American currency) and to earn one course credit.

Procedure

First and second-year students of the Behaviour, Management and Social Science faculty of the University of Twente are obliged to participate in research to gain points per study they participated in to pass the first year. The current study was presented within this system. We thereby already recruited a substantial part of all participants. Other participants were friends and acquaintances of the researchers and have been recruited via social media or face-to-face.

The study took place in three different rented rooms of the University of Twente. In two of the three rooms windows were present, the one remaining room was fully closed off. The participants were asked to come to the indicated room on the time they signed up for, or were invited to. They were told about the aim of this study and the procedure they would face. The participants were then seated in front of a laptop and asked to follow the instructions on the screen. The entire study took place in Qualtrics, an online site where questionnaires can be administered. At the very beginning, an informed consent form was presented to them and they were asked to press the 'Next' button if they understood and agreed to all the listed details. Before starting with the experiment, the respondents were furthermore asked to fill in the following surveys: Dark Triad, Self-Efficacy, HEXACO, Social Values Orientation and Locus of Control. When these were filled in, the visual cue search task started. A total of 15 pictures with an irregularity in it were presented to the participant for a couple of seconds. In the beginning the pictures were shown for five, then for four, and at last for three seconds each.

The participants were hereby asked to find the exception and select the answer out of five options that they considered to be the right one.

The visual cue search task was initially tested on 10 participants in a short pilot study, to find the mean score that participants get, namely 7 right out of 15 answers. This served as a baseline for the participants from the current study: When they scored above the baseline score, they were said to have the possibility to earn money: either for themselves or for a charity. Finding the exception to the rule in the picture and subsequently, giving the right answer was increasingly demanding. It was deliberately intended to make the participants score low on this task, and thereby increase their motivation to lie about their score when they were asked about it afterwards. The researcher told the participants that the program may not work properly yet and therefore may possibly not save their score. They were therefore asked to keep track of their score. Then, at the end of the task, a self-made 'error' was included in the task. It was tried to make the respondent feel as if the program does actually not save the score to further facilitate the respondent to lie.

When the participant was almost done with filling in the first questionnaires, the researcher left the room on the pretext of picking something up. Meanwhile, another person entered the room, also being part of the research team, and pretended to just have participated in the same study. We refer to this role as the 'snake'. The person claimed to come and pick up a forgotten item, which was left in the room. Moreover, the person stated that the researcher has not been present in his round as well and that it would have therefore been easy to lie about the achieved score. The snake then left with his or her item, and the participant continued the experiment. Nearing the end of the experiment, the researcher came back and asked about the score. The respondents then got the chance to perform fraudulent behavior by lying about their score. In the end of the study the total score was displayed on screen to manifest if the participants lied when they were asked about their score earlier. Apart from their behavior to lie or not, the influence of bystanders on the possible criminal behavior of the participant was investigated. The respondent was not aware of the real aim of this research to prevent a bias in the results.

Afterwards, the participant was requested to fill in additional questionnaires, which aimed to measure the following constructs: Guilt, shame, specific power affordances, pluralistic ignorance and diffusion of responsibility. At completion of these questionnaires, participants were thoroughly debriefed, paid, and thanked for their participation.

Materials

Self-efficacy

The self-efficacy of the participant was measured by means of the General Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1979). It consists of 10 items which are measured on a six-point Likert-type scale. An example of an item measured is the following: “I am confident that I could deal efficiently with unexpected events”, $M = 2.58$; $SD = .59$; $\alpha = .87$. Although the focus of this research lied on the construct of self-efficacy, several other constructs have been measured as subpart of this study. Those are the Social Value Orientation Scale, the Dark Triad, the Honesty-Humility scale of the HEXACO, Locus of Control, Shame, Guilt, Specific Power Affordances, Diffusion of Responsibility and Pluralistic Ignorance. Those will be shortly presented in the following. Nevertheless, we will not further discuss them in the current study. Furthermore, those constructs have not been included in the conducted analyses.

Social Value Orientation

The Social Value Orientation Scale (SVO) consists of 9 questions where the participant is asked about certain situations. The participants have to imagine being randomly paired with another person, whom will be referred to as the “other”. Both, the participant and the other will be making choices by selecting either the letter A, B, or C. The choices of the participant will generate points for themselves and the other. Likewise, the other’s choice will produce points for him/her and for the participant. Every point has a value: The more points the participants receive for themselves, the better for them, and the more points the other receives, the better for him/her. An example of a question can be found in the appendix. In this example, if the participant chooses A, they would receive 500 points and Other would receive 100 points; if they choose B, they would receive 500 points and Other 500; and if they choose C, they would receive 550 points and Other 300. This illustrates that their choice influence both the number of points they receive and the number of points the other receives.

Dark Triad

Subsequently, the Dark Triad was measured through a questionnaire which consists of 12 items. There are three constructs being measured, namely Machiavellianism, psychopathy and narcissism. Participants could indicate agreement with each item on a seven-point Likert-type scale (from completely disagree to completely agree). An example of an item measured was the following: “I tend to seek prestige or status”. $M = 4.5$; $SD = .785$; $\alpha = .79$.

HEXACO

After the Dark Triad, there was a questionnaire consisting of 10 items that measured the Honesty-Humility section of the HEXACO-60 on a seven-point Likert-type scale. An example

of an item measured was the following: “I think that I am entitled to more respect than the average person is”. $M = 4.4$; $SD = .55$; $\alpha = .57$

Locus of Control

Then, the locus of control of the participant was measured through a questionnaire consisting of six items. Three items measured the internal locus of control, the remaining three measured the external locus of control. This was appointed on a seven-point Likert-type scale. An example of an item of external locus of control is the following: “Sometimes I feel that I don't have enough control over the direction my life is taking”. An example of one item of internal locus of control is: “What happens to me is my own doing”. $M = 3.8$; $SD = .84$; $\alpha = .19$

Shame, guilt and specific power affordances

After the task was completed, the questionnaire on guilt and shame was administered through 10 items on a seven-point Likert-type scale. An example of a guilt item is: “At this moment I have a clean conscience”, $M = 5.36$; $SD = 1.3$; $\alpha = .79$. An example of a shame item is: “At this moment I feel humiliated”, $M = 5.1$; $SD = 1.05$; Cronbach's Alpha (α) = .62. An example of a specific power affordance item is: “Do you think you influence the outcome of things?”, $M = 3.3$; $SD = .85$; $\alpha = .73$.

Diffusion of responsibility and pluralistic ignorance

After the experiment was completed and the questionnaire on guilt and shame was conducted, the revelation took place. The participant saw the following statement: “You may or may not have lied about your score on the previous task. If you have not lied about it, please imagine that you did while answering the following questions.” Then, a short questionnaire consisting of three items on diffusion of responsibility and five items on pluralistic ignorance was administered to the participant, appointed on a seven-point Likert-type scale. The participants were asked about their opinion of the influence of their behavior on the university, the supervisor and the researcher; this measured the diffusion of responsibility. “I think this behavior is acceptable” is an example of an item on pluralistic ignorance, $\alpha = .79$.

When the participant was almost done with filling in all questionnaires, the researcher reentered the room. After the participant was fully done with filling in all questionnaires, the researcher debriefed the participant by explaining that the lying about their score was part of the study. The entire aim of the study, including all conditions and deceptions was explained to the participant. This was done to ensure that during a follow-up questionnaire, every participant - not only the ones who lied about their score - knew that the situation was a deception and mock up. Additionally, they were asked how many other people they thought were in the room with them excluding themselves and the researcher. We thereby wanted to find out if they were

aware of the fact that there were bystanders present, respectively that they were alone. At completion of this short questionnaire, participants were thoroughly debriefed, paid, and thanked for their participation.

Results

To test H1 which states that people tend to lie less in the presence of bystanders compared to those who are alone we applied a binary logistic regression. We hereby coded group size (0 = non-bystander, 1 = bystander) and lying (0 = no, 1 = yes). We aimed to assess the influence of group size (whether the participant was alone or not) on lying. The model did not show a statistical significance, $\chi^2(1) = 1.05$; $p = .31$. Since the model only consisted of the main factor of group size this term was also not statistically significant $B = -.73$; $SE = .73$; $W(1) = .99$; $p = .32$; $OR = .48$. This lead us to reject hypothesis 1.

The same analysis was applied to test hypothesis 2. We expected that, participants in the presence of bystanders tend to lie more when the goal of the lie is a prosocial one than when they are alone and the goal of the lie is a pro-self one (H2). We hereby coded goal (0 = prosocial, 1 = pro-self) and lying (0 = no, 1 = yes). We tested for an interaction effect between the variables group size and goal, $B = -1.54$; $SE_B = 1.55$; $W(1) = 0.98$; $p = .32$; $OR = 0.07$. The results did not show a statistical significance which lead us to reject hypothesis 2.

Guilt and Shame

To investigate whether shame and guilt are highest when people lie for a pro-self goal compared to a prosocial goal and when they are in the presence of bystanders compared to being alone (H3) we applied a multivariate three-way ANOVA analysis with lying, goal, and group size as independent variables and shame and guilt as dependent variables.

The 3-way interaction term between lying, goal and group size on shame and guilt was statistically significant, $F(2,110) = 4.32$; $p = .02$; $\eta^2 = .073$ (for further information, see Appendix B). Between-subject effects determined that no statistical significance for the interaction effect was found for guilt, $F(1,111) = 0.22$; $p = .64$; $\eta^2 = .00$, but for shame, $F(1,111) = 4.88$; $p = .03$; $\eta^2 = .04$. The interaction effect is localized at the difference between alone and bystander in goal and lying (95% CI = [0.57, 5.10]). Contrary to our expectations, it was found that participants experienced less shame when they lied for a pro-self goal in the presence of bystanders (see Fig. 1 and Fig. 2). Therefore, hypothesis 3 was rejected.

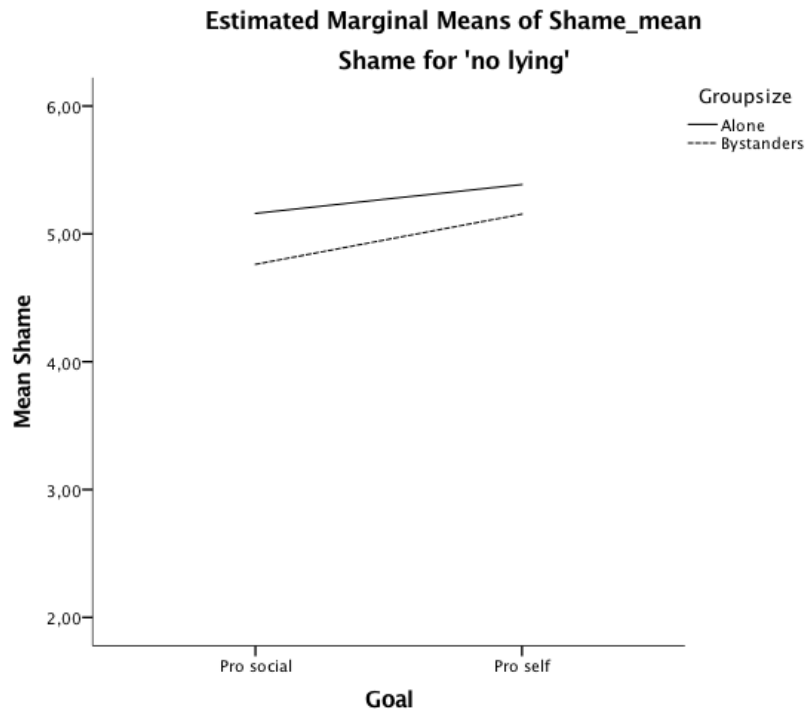


Fig. 1. Three way interaction between no lying, goal and group size on shame

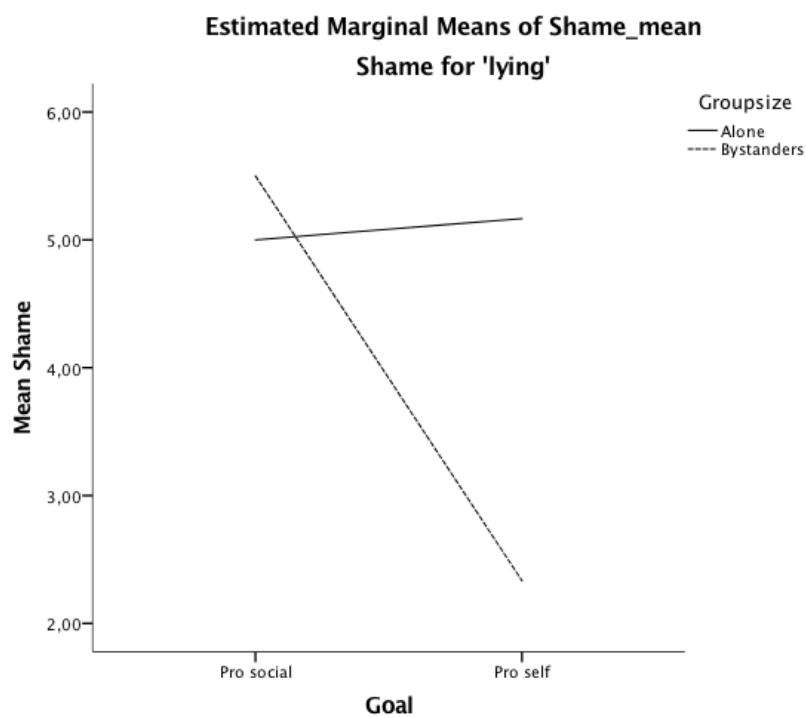


Fig. 2. Three way interaction between lying, goal and group size on shame

Self-Efficacy

To assess whether participants scoring high on self-efficacy are more likely to lie in the presence of bystanders than those who score low on it (H4) we conducted a multivariate binary logistic regression analysis. We were thereby aiming to assess the influence of self-efficacy on lying. The model did not show any statistical significance, $\chi^2(7) = 3.88$; $p = .79$. We further tested on an interaction effect between the variables group size and self-efficacy, $B = -2.60$; $SE = 2.30$; $W(1) = 1.29$; $p = .26$; $OR = .074$. Since results do not show a statistical significance this lead us to reject Hypothesis 4.

Conclusion and Discussion

With this research, we aimed to gain some further knowledge about the influence of bystanders on the behavior of the perpetrator. We tried to make the participants lie and further wanted to investigate whether it makes a difference if the outcome of the lie was prosocial or pro-self. Based on the reviewed literature we expected the participants to generally not lie in the presence of bystanders (H1). Further, we expected them to be more likely to lie in the presence of bystanders if the goal was a prosocial one compared to when they participated alone and the goal was a pro-self one (H2). When it comes to guilt and shame we expected both emotions to be highest when people lie for a pro-self goal compared to a prosocial goal and when they are in the presence of bystanders compared to being alone (H3). Regarding self-efficacy, we expected those who score high on self-efficacy to lie in the presence of bystanders compared to those who score low on it. All hypotheses have been rejected.

Below we outline some theoretical and practical explanations for the outcomes of this study by linking the results to the above-mentioned theories. Generally, it needs to be mentioned that the incentive to make participants lie was not high enough. As only 7.5% of the participants lied this provides just little or no latitude to find the expected effects. It surely has some crucial impact and is consequently reflected in the results.

It was mentioned by a lot of participants that the incentive to lie was not high enough. Many participants stated that they might have lied if the motivation to lie (the money to earn) would have been higher. According to the theory of Competitive Altruism, a behavior needs to be 'expensive' to display for the person in question to be perceived as selflessly taking a risk and thereby gaining social benefits (Hardy & Vugt, 2006). It is now the question if this requirement was met in the current study and if so, why most people nonetheless did not lie. We can reflect on this theory from different perspectives: The fact that a lot of people stated that they might have lied about their score if the incentive would have been higher shows that

the behavior was not 'expensive' enough to perform and participants therefore did not engage in defraud behavior because, according to the theory, they would not have gained any social advantage. Grover and Hui (2005) give support for this notion by arguing that external reward makes people easily forget about their moral norms and make them more likely to lie.

Although it is only said to be the case for pro-self lying, it gives some further support for the idea that the incentive to lie might generally not have been high enough. It is not clear how high this reward needs to be in order to make people engage in lying. Nevertheless, one can assume that a rising external reward might also increase people's motivation to lie.

On the other hand, it can be argued that a higher incentive would have discouraged participants to lie since the risk may have been too high. Especially the fact that this was an academic research which was carried out for university purpose might have discouraged participants to defraud. Taking into consideration that most participants were students at the University of Twente themselves, this might have inhibited them even more from lying because they may have expected negative consequences for their personal career if they did not participate in all conscience. A higher incentive might therefore not have had the desired effect as described in theory. Shalvi, Handgraaf, & De Dreu, (2011) give some further support for the notion that a higher incentive would not necessarily have motivated more people to lie. As lying is the result of a conscious analysis between the potential profit, the probability to get caught and the expected magnitude of punishment (Becker, 1968) they state that people generally avoid major as well as minor lies. Based on the assumption that people want to see themselves as honest and fair (Baumeister, 1998) they seek to maintain this positive self-image by the course of action they choose. Generally, lying seems to be psychologically costly which means that it easily changes people's self-image to the negative. Those psychological costs and the resulting harm to the self-image will therefore only be accepted when the material profit is high enough to compensate. If the material profit is too high, the self-image would be threatened too much and people therefore would not engage in lying. If the material profit is nevertheless not sufficient to compensate for the psychological costs and the resulting threat to the positive self-image, people will not engage in lying either (Mazar, Amir, & Ariely, 2008). To summarize, it is questionable if a higher amount of money would have motivated more participants to lie about their score. It is not clear which line of thinking prevailed within most participants but it is doubtful if a higher incentive would have made the participants lie or if it would have inhibited them even more from lying.

Secondly, it is said that people who have successful experiences in performing a specific task have a higher level of self-efficacy (Bandura, 1997). Although participants might

have scored high on self-efficacy this cannot inevitably be applied to every range. If they did not have any experiences with committing a norm violation their efficacy in this field might accordingly have been relatively low. Considering the fact, that the 'General Self Efficacy Scale' used in this research does not distribute between different fields one might rather have answered the items based on everyday activities and not on activities which were hardly experienced. Their efficacy on norm violations might therefore not have been properly measured. Consequently, this may have resulted into the discrepancy between high scores on self-efficacy but no display of lying behavior. It is therefore a possible explanation that the GSE did not properly capture the self-efficacy on norm violations. For follow up research it would therefore be advisable to make use of a scale which further differentiates between specific types of self-efficacy.

Thirdly, research suggests that the distinction between guilt and shame is not very clear. Whereas one individual might refer to guilt in a specific situation another one might refer to that as shame. This makes it difficult to assess both constructs because most people lack a clear distinction between guilt and shame (Tangney & Dearing, 2003). The fact that most people might not consciously know about the difference between both the questions asked might not have properly assessed both emotions. It is therefore questionable if the participants' score on guilt and shame reflected what it was supposed to. A possible solution would be to give a clarification about both constructs beforehand to ensure that participants indicate the same experience as either guilt or shame.

All in all, Verschuere et al. (2011) gives a general explanation by arguing that, the more people make use of lying the more they tend to do so in future, independent of the type of lying. Following this line of thinking one can assume that most of the participants may not have had a lot of experience with lying. This might have inhibited them to do so in the setting of a research where they expected the costs of a norm violation to be even higher.

Limitations

Several limitations concerning the setup of the study and the consistency of the sample need to be highlighted. Those will be explained in the following.

Setup of the study

Firstly, there were limitations concerning the setup of the study. Due to constraints in the availability of rooms it was not possible to conduct the research in the same room. We were instead forced to operate in different rooms which differed in their features and may therefore have distorted the results. Two of those rooms had glass walls which might have had a crucial impact on the results of this study. The awareness of other people around might have

been increased by those participating in one of these rooms. Although they might have been alone in the room there have been people passing from time to time which surely gave them a different feeling as if the room would have been fully closed.

Secondly, the time the researcher entered the room might have influenced the participant in his decision making to either lie about his score or not. Considering the fact, that approximately half of all respondents participated in a room which was fully closed, the researcher did not always get back into the room on the same stage of the research. Although we tried to always get back when the participant just finished with the task, the time needed to conduct the visual cue search task differed per participant resulting in some rounds where the researcher did not come back in the right moment so that the participant already started to answer the following questions. This might have given the participants a hint about the real aim of this study and might have inhibited participants to give a false score.

Furthermore, we have been conducting the research with alternating roles. The persons filling a position changed, which means that the role of the researcher, the snake and the bystanders have been performed by changing group members which was necessary to save appearances since a lot of participants have been friends and acquaintances of one of the researchers. This leads us to the next limitation related to the consistency of the sample.

Consistency of sample

In general, it can be said that the diversity of the sample has been relatively low which might have biased the results. The diversity has not been given caused by the following facts: Firstly, several participants have been acquaintances and friends of the researchers. Their behavior might have therefore been different from participants which do not have a personal relation to the researcher. It was stated during the study that the given score has no influence on the results of this study and that the money earned has especially been provided by the university for research purpose. It was tried to make clear that the researcher him- or herself would not have any disadvantages if the participant lied. Participants might nevertheless have been worried to negatively affect the results of this study by lying about their score. This might have even more been the case with friends of the researcher who are even more motivated to take part with the best of their knowledge and belief based on a more personal relation to the researcher.

Secondly, a high number of participants have been students of the University of Twente themselves. This might have influenced them in their decision making when having the possibility to lie about their score. A considerable number of participants stated that they did not lie about their score because they were afraid that this would have a negative impact

on this study. One can assume that students of the UT are more occupied with the outcome of this study because they might identify with this institution to a higher degree than non-students. Furthermore, they might fear negative outcomes for their personal career if they did not properly participate in official research.

Strengths

Although this research contained several limitations which might have had an influence on the results, it needs to be mentioned that it nevertheless has its positive aspects. First, investigating further insight in this field of research by means of a true experiment has its advantages compared to other forms of research. A true experiment generally allows to establish a cause and effect relationship between variables because of the random assignment of participants and the possible elimination of confounding variables. This means that an effect in the experimental group can with certainty be ascribed to the independent variables. There are especially benefits for the current study as it can be investigated if the absence of bystanders generally causes the occurrence of lying.

Moreover, this study was carried out in a realistic setting meaning that participants will have experienced real emotions and acted the way they would have acted in real-life. Considering that they were not aware of the aim of this research but were left under the pretext of an unrelated study one can assume that they acted realistically. This made the results more credible.

Future Research

Although this study did not meet the expected results it would be advisable to again try to gain some further insight in this field of research. In a follow up study, the just mentioned limitations need to be controlled. By assessing the influence of bystanders on the perpetrator variables involved in violations can be identified. On the long-term it will thereby be possible to manipulate these variables to be able to prevent such violations in future. This will be for instance possible by means of specific interventions. All in all, investigating the influence of bystanders on perpetrators is a small step into a safer world.

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Appendix A

Example of the Social Value Orientation Scale

	A	B	C
You Get	500	500	550
Other Gets	100	500	300

Appendix B

Three-way interaction between lying, goal and group size and between-subject effects of all independent variables on either guilt or shame

	mutlivariate				guilt				shame			
	F	df1 / df2	p	η^2	F	df	p	η^2	F	df	p	η^2
Lying	2.33	2, 110	.10	.04	0.20	1	.66	.00	2.42	1	.12	.02
Groupsize	4.73	2, 110	.01	.08	1.16	1	.28	.01	3.50	1	.06	.03
Goal	3.02	2, 110	.05	.05	0.72	1	.40	.00	2.26	1	.14	.02
Lying*Groupsize	2.08	2, 110	.13	.04	0.81	1	.37	.01	1.15	1	.29	.01
Lying * Goal	3.87	2, 110	.02	.07	0.02	1	.89	.00	5.22	1	.02	.05
Groupsize*Goal	4.52	2, 110	.01	.08	0.71	1	.40	.01	3.99	1	.05	.04
Lying*Goal*Groupsize	4.32	2, 110	.02	.07	0.22	1	.64	.00	4.88	1	.03	.04