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The Impact of Bystanders on Offenders: The Presence of Bystanders Increases the Likelihood of Shoplifting

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February 2017, Enschede

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Abstract

Shoplifting is a common crime in the Netherlands and billions of euros have been spent on prevention. According to the Routine Activity Theory (RAT), the presence of a guardian can already prevent crimes from taking place. The present study will examine the effects of bystanders on shoplifting behavior in a quasi-experiment. Participants were tasked to steal a bracelet from a store, where the number of shoppers (i.e. bystanders) actually varied. Additionally, private self-awareness was manipulated by placing (vs. not placing) a mirror in the store. The main outcome measures in the experiment were shoplifting behavior and level of arousal, which were measured in real time with an Empatica E4 wristband. Based on the RAT, we proposed two competing hypotheses. It was expected that the presence of a bystander will make it less likely for participants to steal (H1a). However, if too many bystanders are present, the opposite occurs: shoplifting behavior will increase (H1b) because offenders feel less visible. Furthermore, the presence of a mirror was expected to result in reduced shoplifting behavior, (H2) due to increased self-awareness. For the level of arousal, a main effect was hypothesized: more bystanders will result in a higher level of arousal (H3). The findings showed a reverse pattern expected from RAT and participants were more likely to steal when bystanders were around. As expected, with the presence of the mirror, participants were less likely to steal compared with participant in no-mirror condition. No significant results have been found for the level of arousal. This study revealed that the RAT does not apply to a crime such as shoplifting, but indicates that mirrors in shops could serve as monitor to discourage offenders from shoplifting.

Keywords: Routine Activity Theory, shoplifting, bystanders, self-awareness, arousal

The Impact of Bystanders on Offenders: The Presence of Bystanders Increases the Likelihood of Shoplifting.

Theft is globally the most common crime and The Netherlands could be seen as a champion regarding most shoplifters (Tseloni, Mailley, Farrell & Tilley, 2010). It is ranked second on the yearly Global Retail Theft Thermometer (2015). 42.220 declarations of shoplifting are registered (Centraal Bureau van Statistiek, 2015) and have cost around 1.36 billion euros for Dutch shopkeepers in 2014 (Centrum voor Criminaliteits preventie en Veiligheid (CCV), 2015). The numbers are expected to be even higher since not all shopkeepers register shoplifters (Detail Handel, 2016). Furthermore, investing in shoplifting prevention has cost shopkeepers a lot in The Netherlands: in 2014 they spend around 1.1 billion euros on detection gates and cameras (CCV, 2015) and the Dutch government is spending a lot of money on projects to prevent these crimes. Examples of government interventions are offering free training to shopkeepers about shoplifters (CVV, n.d.) and the development of a project named 'dealing with shoplifters' where shoplifters have to pay €188 euro if they get caught (Detail Handel, n.d.).

Besides the costs for decreasing and preventing shoplifting, it is also important to focus on perpetrators. Research on perpetrators can achieve more understanding of crime events and it could have a major implication for the development of effective crime prevention strategies.

Bystanders are possibly an important factor regarding shoplift behavior. It appears that bystanders also contribute to the reduction of theft. The presence of a guardian can already prevent a crime from taking place (Cohen & Felson, 1979). However, it can still take place while guardians (also named bystanders in social psychology) are around. Surprisingly, not much research has focused on perpetrators and whether they commit a crime or not in the presence of others. In other words, it is not clear if offenders actually care about the presence of bystanders or guards. The current research aims to address this gap in knowledge by experimentally examining if shoplifters are affected by bystanders while they commit an offense. In addition, we also examined if self-awareness plays a role in the occurrence of shoplifting.

Routine Activity Theory

An important theory about the effects of bystanders on shoplifters is the Routine Activity Theory (RAT). The RAT proposes that there are three inclinations, which determine if a crime can take place: 1) a motivated offender, 2) a suitable target and 3) the absence of a capable guardian (Cohen & Felson, 1979). This theory derives from the human ecology theory that investigates temporal aspects of human behavior in community environments (Hawley, 1950). Cohen and Felson (1979)

adapted this theory to introduce the RAT, where the focus lies on the environmental context in which crimes occur. They assert that affecting the assembled time and space of the three elements leads to structural changes in the patterns of the routine activity and could influence crime rates. Furthermore, they argue that a lack of one of those three factors could prevent crime (Cohen & Felson, 1979).

Firstly, in order to commit a successful crime an offender should be motivated. The RAT supposes that the offender is motivated to commit an offense (Cohen & Felson, 1979). Secondly, a suitable target is important to reach the aim of the offender. A suitable target has value and is seen by the offender as attractive and vulnerable (Meier & Miethe, 1993). If the offender is motivated and they find a suitable target, the next requirement for crime is: whether the offender is able to commit the crime. Finally, the absence of capable guardianship could lead to a crime. A capable guardianship offers the possibility to prevent crime when a motivated offender with a suitable target is present (Cohen & Felson, 1979). Capable guardianship does include both formal guardians (police officers and security guards) and informal guardians (citizens, also named bystanders). Citizens are more likely to provide guardianship from potential criminal behavior than police officers due to their more common presence in streets and neighborhoods (Cohen & Felson, 1979). The presence of a capable guardian nearby could therefore prevent the offender from committing a crime.

Bystander and Crime

Not only is the presence of the bystander important for preventing a crime, being in action must also be taken into account. Reynald (2009) established the 4 model stages of guardian intensity; invisibility, availability, capability and intervening guardianship and to what extent a crime takes place. Reynald's study focused on residential areas and showed that crime decreases as the stage progresses. In the 'invisibility' stage, no visible guardian is available to act, so to increase intensity the next stage should occur where guardians are available. Crime is already less likely to take place in the 'availability' stage of guardianship, and in the 'capability' and 'intervening' intervention stages of guardianship crime decreases vastly. This activity level (also named intensity) has to do with these factors: territory (having a nameplate in front your house), invigilate (no obstacles like trees, or walls in front of the window of your house) to keep an eye on the neighborhood, and social interaction (between the neighbors) incline people to feel capable and even intervene when crime occurs (Reynald, 2009). Because the intensity level is higher in these situations, it may be possible that it deters perpetrators from entering the area and committing a crime. Reynald's study (2009) revealed that when the guardian intensity stage is high, less criminal behavior occurred compared to other residential areas with a lower stage of guardian intensity. Implementing those factors in a shop could also possibly lead to less criminal behavior.

On the other hand, places that are crowded are less effective for control and monitoring (Reynald, 2009). This means that offenders could use bystanders as cover. Additionally, anonymity could arise in busy places because individuals feel more anonymous in a 'group' than alone. This

could facilitate antisocial behavior (Mathes & Guest, 1976) and therefore motivate offenders to commit a crime. In such busy places people - or in this case shopkeepers - are probably less competent to make a distinction between a potential offender (shoplifters) and well-intended persons (shoppers) (Roncek, 1981). Results show that areas where anonymity arises could heighten the effect of crime (Ronseck & Maier, 1991). Two examples supporting this notion are: First, positive correlation found between the amount of crime and the accessibility of streets (Hillier, 1998 in Reynald, 2009). Highly accessible roads with a high number of people or traffic are places where crimes are very likely to occur (Beavon, Brantingham & Brantingham, 1994). Second, the bystander effect is another reason why crime could occur in places where many bystanders are around. It explains that if more people are present at a crime or situation where help is needed, people are less likely to intervene because of diffusion of responsibility: people think others will help the person in need (Ficher et al., 2011). This happened in the famous case of Kitty Genovese, where 38 people witnessed her being stabbed to death and nobody intervened (Latané & Nida, 1981).

In retrospect to shoplifting and combining the theories about bystanders, we expect that bystanders could be a reason why offenders would not steal. According to the RAT we assume that:

Hypothesis 1a: ‘An offender is less likely to steal when bystanders are around in contrast to no bystanders around’.

Alternatively, we expect that it will work the other way around and an offender will commit an offense when a lot of bystanders are in the store and there is less effective control and monitoring. Therefore an alternative hypothesis is formulated where the opposite is expected:

Hypothesis 1b: ‘An offender is more likely to steal (when the overview is lost and visibility decreased) due the presence of bystanders’.

Self-awareness

Self-awareness, besides anonymity and bystanders, could also play a role in influencing behavior of offenders during a criminal act. Self-awareness refers to the ability to understand your own feelings and beliefs (Focquaert, Braeckman & Platek, 2008). Research which focused on the bystander effect have found reversal when (public) self-awareness in social setting was increased. People who were self-aware, were more likely to intervene and help people (Van Bommel, Van Prooijen, Elffers, & Van Lange, 2012). It is unknown if this also applies to offenders and if they would show pro-social behavior when they are self-aware.

The self-awareness theory illustrates that people’s attention can be focused on the environment or on themselves but not on both (Duval and Wicklund, 1972). There has been a distinction made during the development of the self-awareness theory, namely private self-awareness and public self-awareness. While public-awareness refers to awareness of oneself as viewed by others, private-awareness involves awareness of the self from personal perspective (Fenigstein, 2013). Most

of the time people are not self-aware but they could be made self-focused during different situations, for instance performing in front of an audience (public self-awareness) or looking in the mirror (private self-awareness; Goukens, Dewitte & Warlop, 2008).

Self-awareness plays a role in the behavior of individuals. Froming, Walker and Kopyan (1982) report that behavior becomes more consistent with expectations of society, when people are privately self-aware. It can also play a role in making a decision while taking action. When an individual is self-focused he or she can be more worried about taking actions which are appropriate. This means that a self-aware person behaves to the norms of social behavior.

Different studies presented that self-awareness by looking in the mirror, decreases cheating (Diener & Wallbom, 1976; Vallacher & Solodky, 1978) and increases the tendency to help (Berkowitz, 1987). Individuals who are private self-aware could use their personal feelings, character and motives to behave in a certain way. In situations where a criminal act could occur, self-awareness may play a role and make the person conscious of their attitude and that could reduce criminal behavior. In the current research a mirror will be placed as manipulation in front of the offenders' target to increase private self-awareness. Therefore we expect:

Hypothesis 2: 'Offenders with increased private self-awareness (e.g. a mirror) are less likely to steal'.

Arousal

The presence of a guardian is one of the elements in order for a crime to occur according to RAT. Within this element arousal has a value on the outcome of the crime. Arousal is the activated state of the central and autonomic nervous systems. It is the condition in which the senses of an individual are open for influence from outsiders (Encyclo, n.d.). Martens (1969) reports that the presence of others in general increases physiological arousal. Zajonc's drive theory proposes that people react physiologically to the presence of people but the extent of this change depends on who is watching and on the type of situation (Forsyth, 2013). Many researches have shown that individuals perform better in the presence of audience such as cycle racing (Triplett, 1898), tasks with competitive effects (Allport, 1920) and pseudo recognition task (Zajonc & Sales, 1966; Cottrell, Wack, Sekerak & Rittle, 1968). This is the case when a task has been well practiced and managed without requiring thought about it (dominant response). However, arousal decreases a performance if the task is new and/or complex (non-dominant response) which is most likely the case with shoplifting.

An indicator of arousal is the endocrine system. The endocrine system regulates many bodily functions including temperature, blood pressure, breathing, heart rate and sweating. Change in skin conductance refers to ElectroDermal Activity (EDA) which allows the observation of arousal (Poh, Swenson, & Picard, 2010). Function of the endocrine system are very sensitive for changes in arousal and increasing population density seems also to be a symptom for endocrine (Zajonc, 1965) which

means that the number of people in close proximity reinforce arousal. This could be applied to a shop where shoplifters and shoppers (bystanders) are around. Therefore it is hypothesized:

Hypothesis 3: ‘Offenders are more aroused when more bystanders are around compared to offenders with no bystanders around.’

Personality

Another element according to the RAT for a crime to take place is the motivation of the offender. Personality traits could be one of the factors of offender's motivation for committing an offense. Machiavellians (manipulative behavior), psychopathy (impulsivity and low anxiety and empathy) and narcissism (dominance, grandiosity and superiority) are dysfunctional personality traits (Paulhus & Williams, 2002) that occur more frequently during criminal behavior (Forsyth, 2013). Those personality traits will be used for explanatory reasoning shoplifting.

Arousal will also be taken into account when reasoning the personality traits. People with psychiatric disorder (eg. psychopathy) have dysfunctions in the neural structure which impair the amygdala process (James and Blair, 2003). Since the neural structure is involved within the central and autonomic nervous system, arousal could be lowered with the dark triad personality traits. Different studies have shown that psychopathic criminals show lower frequency of skin conductance than non-psychopathic criminals (Hare, 1968; Schalling, Lidberg, Levander & Dahlin, 1973). Comparable results have been found with offenders with antisocial traits or antisocial personality disorder and a non-control group (Raine, Venables & Williams, 1990). Therefore the personality traits will be taken into account while observing participants' arousal.

Current Study

In this study, we will investigate the influence of bystanders on offenders while committing an offense (shoplifting). We will also investigate if private self-awareness, by placing a mirror, can influence the offender's behavior. In the experimental setup, we simulate the RAT theory by asking participant to pretend to be a mystery shopper and 1) motivate them with compensation and 2) give them a specific product to steal out of a store. This will be done in the natural setting where 3) bystanders (shoppers) are around or not. The manipulation within this study is the mirror that would be placed around the offenders' target. We expect that an offender is less likely to steal when bystanders are around but when the overview is lost because of too many bystanders an offender is more likely to steal. We also expect that the condition with a mirror, offenders would become more private self-aware and are therefore less likely to steal. Finally, we think that offenders are more aroused when more bystanders are around.

Method

Participants

One hundred and twenty participants (100 female, 20 male; with an average age of 28, standard deviation [*SD*] = 12.57) took part in this study for €5,- the amount could increase or decrease

with €2,50 depending on the performance of the task . The participants were randomly assigned to one of the two conditions (mirror present vs. absent). We also measured the number of bystanders during the experiment (bystanders vs. no bystanders).

Procedure

Participants were randomly asked to partake with the study. Passersby on the street and recruitment from experimenter social network have partaken in this study. Furthermore, advertisements were placed on different locations.

The study was advertised as an experiment about being a mystery shopper, within the aim to study the behavior of people while shopping. Participants did not get information about the real aim (shoplifting) of this study before participating because it could lead to participation bias. Informing participants of the study's true goal would likely attract sensation seekers.

When participants showed interest in the study, they were asked to follow the researcher to the office, nearby the store where the experiment took place. The participants were welcomed and it was explained that the given task, for now, would be stealing a bracelet from the store. They were also informed that the store is aware of the experiment however, the employee in the store would not know when participants would come, what kind of task they had to fulfill and what kind of item would be stolen. If they got caught, they had to explain that they were participating in the experiment so no law enforcement will get involved. The experimenter emphasized that the participants have to pretend being a real thief and to keep in mind what the actual consequences could be to reduce sorting out their limits. The participants were told that they get 10 minutes to fulfill this task and after coming back to the office they need to fill in a questionnaire.

The participants were explained that they would get €5,- for their participation and if they succeed to steal a bracelet, without getting caught, they get an extra bonus of €2,50. If the participants did not succeed or if they got caught, their payment would be reduced with €2.50. Basically it means that all participants received €2,50 and that the amount increased with €5,- if they succeeded with the theft. Appointing the compensation as €5,- with an increasing or decreasing of €2.50 should make the participant feel like they could cost or benefit from the study, depending on their behavior.

After the instruction, the participants were asked to read and sign the informed consent form before the experiment started. They got an Empatica E4 to wear in order to measure their arousal. The Empatica E4 measured EDA, blood pressure, accelerometers, heart rate, heart rate differentiation and temperature. The participants were explained that the Empatica E4 will measure the level of arousal. After wearing the Empatica E4 bracelet, they were instructed to start with the task.

When the participants came back to the office, they told the experimenter about their experience and if they succeeded with the task. Afterwards, instructions were given about the questionnaire and at completion they were thoroughly debriefed, received a written debriefing, got their compensation and were thanked for their time and participation.

Design

The design of the quasi-experiment was to see if bystanders influence offenders during shoplifting and if private self-awareness (e.g. a mirror) could lead to a reduction of shoplifting behavior.

The condition of bystanders was measured in a neutral setting; it included real customers that were unaware of the experiment. One employee of the cooperated store was involved within this study and did not know about the bystander effect but she did know which product was the target of the theft; as a result, being extremely alert and keeping an extra eye on every person in the store was excluded from the research. It also helped the employee to continue with her work in the store. The employee was told not to intervene when a shopper was suspicious, unless the person was visibly stealing the item. So the focus will be on offenders and whether they were affected by bystanders.

The condition with private self-awareness included manipulation with a mirror. A 160 degree security mirror was used to get the participant out of anonymity, creating the feeling of being monitored and it makes the participant aware of his/her behavior. The mirror was placed on the right corner, around half a meter from the position of the bracelets. Because of the 160 degree of the mirror, it was almost impossible not to see the mirror, even standing in front of the bracelets (See appendix A and B).

Questionnaire:

The questionnaire started with general questions about the gender and age of the participant and it continued with the self-consciousness scale, the Positive and Negative Affect Schedule (PANAS), Dark Triad and ended again with general questions.

The Self-Consciousness Scale included 17 statements about private and public self-awareness, which included 10 items of private (*'I was attentive to my inner feelings'*) and 7 items of public (*'I was concerned about what other people thought of me'*) self-awareness. This was indicated with a 5-point Likert scale (1 = *strongly agree*, 5 = *strongly disagree*). A total scale of private self-awareness was constructed by averaging the score over the ten items ($M = 2.69$; $SD = .63$; Cronbach's Alpha (α) = .64).

Then the PANAS had to be filled in. It contained 20 emotions whose 10 negative (e.g. *'guilty'*) and 10 positive (e.g. *'excited'*), where the participants had to fill in how they experienced those emotion on a 5-point Likert scale (1 = *very slightly or not at all*, 5 = *extremely*). A total scale was constructed by summing the score over the ten positive items ($M = 30.97$; $SD = 7.21$; Cronbach's Alpha (α) = .82) and ten negative items ($M = 27.45$; $SD = 7.77$; Cronbach's Alpha (α) = .84).

Next, statements about personality were presented and the dark triad was used. The dark triad included 12 statements with a reliability of $\alpha = .69$ and were measured with a 5-point Likert scale (1 = *completely disagree*, 5 = *completely agree*).

Those statements were divided into three personality traits, with four items about Narcissism (*'I*

tend to want others to admire me'), at $\alpha = .73$. Four items about Machiavellianism (*I tend to manipulate others to get my way*'), at $\alpha = .67$. And four items about Psychopathy (*I tend to lack remorse*'), however cronbach alpha was pretty low for those items, so we measured psychopathy with 2 items, $r = .55, p < .01$. The other two personality traits were constructed by summing the score of the four items: Narcissism: ($M = 10.62; SD = 2.99$) and Machiavellianism ($M = 7.97; SD = 2.81$).

The last questions of the questionnaire described whether they were greeted by the employee, how many bystanders were around, why they chose to steal the product or not and if they had previous experience with shoplifting. Additionally, we asked whether they saw the mirror or not.

In order to measure arousal, we used the data from Empatica E4. The average EDA of each participant was calculated in Excel, to describe the level of arousal.

Results

Bystanders

Our expectation was that offenders are less likely to commit shoplifting when bystanders are around, in contrast with the absence of bystanders (H1a) but we alternatively suspected that the opposite would happen; due the presence of bystanders, the visibility of shoplifting decreased and offenders are more likely to steal (H1b).

We used binary logistic regression to test this and coded bystander presence (coded 0 *for absent*, coded 1 *for present*) and stealing (0 = *yes*, 1 = *no*). The analysis showed that there is significant effect of bystanders on shoplifting behavior. Wald's $X^2 (1, N = 120) = 3.92, p = .05$ and $\text{Exp}(B) = 2.27$. There was an equal number of participants who did and did not steal (51% vs. 49%) when no bystanders were around, whereas when bystanders were around, more participants did (77%) steal than participants who did not (23%) steal which was expected in hypothesis 1b.

The same data has been used to analyze the actual number of bystanders rather the presence vs. absence of bystanders. A similar pattern emerged with a marginal effect on shoplifting behavior, $X^2 (1, N = 120) = 3.40, p = .07$ and $\text{Exp}(b) = .812$. Thus, the findings showed reverse for hypothesis 1a and provided support for hypothesis 1b, namely that the presence of more bystanders makes offenders more likely to steal.

Private self-awareness

A manipulation check for private self-awareness (mirror absence vs. mirror presence) has been done. Unlike expected, the manipulation check failed which means that participants, who were in the mirror absence condition, had an equal score of private self-awareness ($M = 2.67, SD = .58$) compared to participants in the mirror condition ($M = 2.71, SD = .68$).

We expected that offenders, in the mirror condition, would be more privately self-aware and are less likely to steal (H2). A binary logistic regression (mirror presence, coded 0 *for absent*, coded 1

for present and stealing, coded 0 = yes, 1 = no) yielded a significant effect on shoplifting behavior, Wald's $X^2(1, N = 60) = 10.46, p = .02$ and $\text{Exp}(B) = .04$. This means that participants were less likely to steal when a mirror was present (55%) nearby the offenders target in comparison with the absence of the mirror (75%). Hypothesis 2 is confirmed on the second part; offenders in the mirror conditions are less likely to steal but were not more private self-aware by the mirror¹.

Arousal

Moreover, it was assumed that offenders would be more aroused when bystanders are around (H3). Unlike what we expected, the one-way ANOVA, with increased bystanders as independent variable showed no significant results, $F(1, 118) = .05, p = .22$. There were no significant differences between the level of arousal without bystanders ($M = 2.80, SD = 3.43$), with one bystander ($M = 5.35, SD = 9.15$) and with two or more bystanders ($M = 3.13, SD = 6.21$). This means that there is no statistical evidence that offenders would be more aroused with the presence of bystanders, compared to offenders without bystanders. Therefore hypothesis 3 cannot be confirmed.

Additional analyses

Anonymity, To assess whether being greeted by the employee could lead to less anonymity and if this influences shoplifting behavior, we used a binary logistic regression. This showed that greetings are not significant predictors for stealing, Wald's $X^2(1, N = 120) = 1.24, p = .27$. Indicates that greeting the participant, to decrease anonymity, did not influence the participant's behavior regarding shoplifting. Participants who were greeted stole (57%) as much as the participants who were not greeted (52.9%).

Personality, Personality has been taken into account, to see if it has an effect on theft and to what extent arousal relates to personality. To explore if a dysfunctional personality plays a role in offenders' motivation for shoplifting, we used a binary logistic regression. This showed that the dark triad is not a significant predictor for stealing, Wald's $X^2(1, N = 120) = .06, p = .81$. Taking the personality traits individually also showed that psychopathy ($p = .91$), machiavellianism ($p = .45$) and narcissism ($p = .87$) were not significant predictors for stealing.

To assess if there was a connection between arousal and dysfunctional personality traits, a bivariate correlation was applied. This revealed no significant correlation for psychopathy, $r = .03, p = .76$, machiavellianism, $r = .00, p = .96$ and narcissism, $r = .57, p = .54$. This means that there is no relation between personality traits of the dark triad and arousal.

Emotions, An one-way ANOVA was conducted to compare the effect of stealing, as independent variable on positive or negative emotions. This revealed a main effect on positive emotions, $F(1, 118) = 9.04, p < .01$ but no main effect on negative emotions, $F(1, 118) = .02, p = .88$.

¹We were also interested in whether participants who saw the mirror differ in their (stealing) behavior than participants who did not see the mirror. A chi-square test for independence did not reveal significant differences, $X^2(1, N = 60) = .02, p = .90$. This means that participants who reported seeing the mirror had stolen an equal amount (42.4%) compared to the participants who reported not seeing the mirror (40.7%).

This means that participants who had stolen successfully felt more positive emotions ($M = 32.37$, $SD = 6.71$) than participants who did not succeed ($M = 28.36$, $SD = 7.45$). Negative emotions did not affect stealing, which means that participants had equal feelings of negative emotion when they were successful with stealing ($M = 27.37$, $SD = 7.62$) compared to participants who did not succeed ($M = 27.60$, $SD = 8.15$).

Discussion and Conclusion

The aim of this study was to investigate if offenders could be affected by bystanders or private self-awareness (e.g. mirror) when committing an offense (shoplifting). The expectations were that the presence of a bystander would encourage an offender not to shoplift but it could also cause the opposite situation; due the presence of bystanders, the overview could be lost and offenders are, in that case, more likely to steal. It was also expected that a mirror would make an offender more private self-aware and therefore less likely to steal. Furthermore, it was expected that offenders would experience more arousal, when more bystanders are around, compared with the absence of bystanders. The results showed that offenders are encouraged by bystanders to steal. In other words, if more bystanders are present, more offenders are likely to commit an offense. In addition, a mirror influenced the offenders' behavior. They were less likely to commit shoplifting; however, these offenders were not more private self-aware compared to offenders in the absence of the mirror condition. Contrary to expectations, results did not show significant differences in the level of arousal between participants, with bystanders and without bystanders. Below the theoretical and practical implication will be outlined. Also the strengths and limitations of this investigation will be presented.

According to the RAT, the presence of a guardian or bystander could prevent a criminal act from taking place (Cohen & Felson, 1979). Support has been found by Messner and Blau (1987), who have investigated 'routine activities' like leisure activities and what kind of correlation it has with the rate of crimes. Their results were consistent with the RAT, whereby leisure activities within households have led to negative associations with crime and leisure activities away from household yield positive relation with crime. Other studies focusing on street robbery did not find full support of the RAT. In their study, street robbery was caused by social disorganization than by routine activity factors (Smith, Frazee & Davison, 2000). The results of this current study were inconsistent with the RAT and found reversal, whereby the presence of bystanders have led offenders to commit more theft. One of the reasons could be because the experiment was done in a small store (55m²). Participants felt that when the store was empty, they got the full attention and felt more surveyed than if there were one or more bystanders around. This could have influenced offenders to steal when more bystanders were around. This is in agreement with the Beavon, Brantingham and Brantingham (1994) study, where criminal acts were likely to take place at a high level of traffic and crowds. The reversal that has been found could also be explained by Eck's crime triangle whereby the place where the

crime takes place is supervised by a manager (Felson, 1995). Within a shop, the employee could be seen as a manager who supervises the 'crime setting' and when the setting is not watched by the manager, a crime is likely to occur (Wortley & Mazerolle, 2008). Even though this cannot explain the result of the current study by the equal amount of stealing vs. not stealing when no bystanders are around, it could explain that more bystanders lead to less supervision and therefore shoplifters are likely to steal. It could be assumed that RAT does not apply to all types of criminal acts. Depending on type of crime, time and space, the factor of guardianship could affect offenders in a positive or negative way.

Furthermore, the current study did not find differences in the level of private self-awareness with or without a mirror, which is not in contrast with Carver and Scheier (1978), who found differences in the level of self-awareness in their study (mirror present vs. absence of mirror). The reason that no differences are found in this study could be because multiple mirrors (to fit clothes) were hanging in the store, besides the offender's target and this could result to an equal level of private self-awareness. A manipulation check for self-awareness is not required according to Vallenchar and Solodky (1979) because asking questions about the self to the participants would bring up self-awareness. Nevertheless, the equal level of private self-awareness, the mirror in front of the offender's target did unconsciously influence participants not to steal. Comparable results have also been found in the Van Bommel, Van Prooijen, Elffers and Van Lange (2014) study, where participants did not report seeing the camera but it did influence their behavior. Notwithstanding those items are not the same, they have something in common, namely making people self-aware. Thus, cues in an environment could not be perceived explicitly but may still influence the behavior of people (Bateson, Nettle & Roberts, 2006).

In addition, the presence of the 160 degree mirror has served as objective visibility. Not only the shoplifter could see himself and the employee; in fact, the employee could also see the shoplifter and his behavior. The mirror could be seen as an extra item that monitors shoppers and possibly blocks the opportunity to commit shoplifting (Reynald, 2011).

Another aim of a mirror is motivating social behavior (Berkowitz, 1987) and in the current study it should have led to a reduction of shoplifting. But authoritarian norm should also be taken into account what could have increased 'social behavior' in a negative way. During the verbal debriefing, participants reported their stealing behavior as social because they wanted to fulfill the task that was given by the experimenter. This is consistent with the famous study of Milgram where 65% obedience of the participants gave other participants electrical shocks until 450 volt because the experimenter asked them to do so (Forsyth, 2013). Even though this study is not comparable, shoplifting also includes morality factors and participants could have seen the experimenter as an authority figure; therefore, it may be a reason why they fulfilled the task even if it was in conflict with their morality. Obedience to authority could both be a reason for shoplifting and why bystanders would not prevent

the criminal act.

The absence of significant differences in the level of arousal (e.g. skin conductance) and bystanders could be attributed to the given task and the weather condition. The given task could be experienced as stressful and frightening which ensures sweating (Hoehn-Saric & McLeod, 2000). In addition, the data collection was done during the summer, in which the temperature differed between 20 degrees and on some days above 30 degrees. Both could explain the high difference in arousal level (.06 vs. .49) and therefore it cannot be determined whether the measured arousal is completely reliable.

Moreover, the results of this study also showed positive emotions after successfully stealing the item. This might be caused by the difficulty of the given task and that no preparation was possible. Successful stealing therefore made the participant feel positive (level of emotion), despite the content of the task.

Strengths and limitations

The strength within this study is that effects could be measured by putting up a quasi-experiment, which was set up in a real store. This has created real anxiety and stress and it has ensured the perspective of shoplifters, without the participant knowing what would be measured.

Another strength within this study is the reward that participants receive if they succeeded with the theft. The reward of '€2,50' (actually €5,-) made it possible to mimic the RAT by motivating the offender to commit a crime. Perhaps this might be a limitation too, because there were no severe punishments or consequences for stealing. Further research could investigate if a reward and punishment or only a punishment could frighten participants more from committing shoplifting. This study also encouraged participants to experience some kind of sensation seeking, which could be another reason why participants risked stealing.

Another limitation is that the written instruction described that the payment would be reduced with €2,50 if the participants got caught (as consequences). This was in discrepancy with the verbal explanation as described in the method section. There is mistakenly said that participants 'win' €5,- if they succeed stealing. According to the written instructions, the participants who did not steal would receive €5,-. However, they eventually received only €2,50. It is important to note that oral information is not memorized as thorough as information on paper (Mayer, 2009). In our procedure we gave the participants an oral explanation of the experiment before they read and signed the informed consent. Therefore, we took the informed consent as our guide line, since we assumed that the participants have understood the rules correctly (eg. '*I choose to steal the item because it had a reward (+€2.50)*'). Probably the compensation for this study was not that important because participants clearly pointed out that they tried to fulfill the task of shoplifting because of the 'kick', during the debriefing. This is most likely the case with shoplifters; stealing creates an adrenaline rush (Shulman, 2004) and is perhaps the reason to steal, which is presumably the case for shoplifting

addiction.

A limitation what could be taken into account in a future study is the offender's target. It could be that if different targets were given to the participants, ranging in difficulty, could have influenced the criminal behavior, whereby bystander may have more impact. A bracelet is easier to steal by putting it around the arm or in the pocket and it leaves less 'traces' than a garment (e.g. clothes hanger).

Further research may focus on the presence of bystanders in other criminal acts, than shoplifting to investigate if bystanders will be able to reduce or prevent criminal behavior rather than increasing it.

The current study has allowed to look through the eyes of an offender and showed that a mirror could serve as monitor to discourage offenders to steal an item out of a store. This study also found reversal with the RAT and concluded that the presence of bystanders affect offenders in such a way that when more bystanders are around in a shop, shoplifting is probably committed. The findings disconfirmed the RAT in such way that, the RAT does not apply to all criminal acts and it gives a good contribution to scientific literature. Even though this study has focused on The Netherlands, it could apply to all countries because shoplifting is a global phenomenon.

Acknowledgements

I would like to thank my supervisor Marco van Bommel for thinking along during the process of this thesis and providing feedback. I do want to thank my friend Baan Al-Othmani for also providing feedback on the concepts of this thesis. Furthermore I would like to thank Esther Goedendorp for allowing me to do the experiment in the store and all the participants who took part in this study.

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Appendix A: Shop where the experiment took place, condition without mirror



Appendix B: Shop where the experiment took place, condition with a mirror

