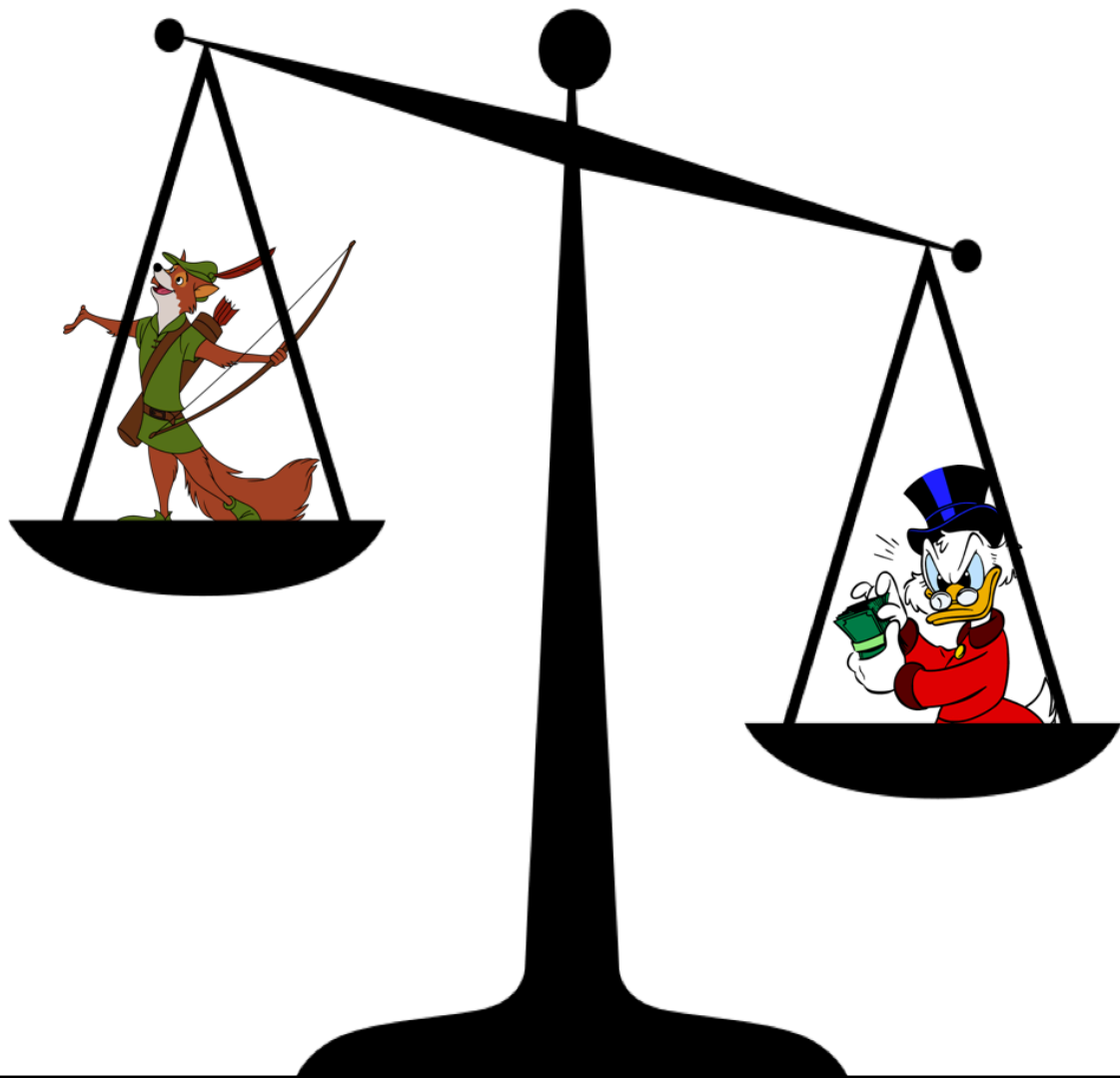


The Complexity of Human Dishonesty

Does the goal justify the means?



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Preface

Dear reader,

This master thesis is written by two students at the University of Stavanger in the spring of 2018. Our degree is general Business Administration; however, we have two different specializations, specifically Strategy and Economic Analysis. Thus, this master thesis is somewhat multidisciplinary, and we find that these directions provides us with an interesting meeting point, namely the field of behavioural economics. Since we started our degree, the fascination of the interplay between psychology and economics have been present. This is why we strive to add a new dimension to the existing research, which we believe can be useful for a wider audience of people and businesses, and perhaps as important - stirs our curiosity tremendously. To accomplish this, a substantial amount of work has been put in, and it has been demanding both in terms of time and mental capacity. Nonetheless, we definitely feel that the experience we have gained from doing this is priceless, and we are now motivated to pursue further experimental research in the future. Hopefully, this master thesis embodies the knowledge and reflection skills we have learned at the University of Stavanger.

The choosing of topic for our thesis was challenging, however it was important for us to choose an up-to-date subject with extensive new and interesting research. Thus, we were inspired by Ariely's experiments on dishonesty, and were quickly intrigued by the complexity of this subject. Dishonesty can be a huge burden for both society and individuals, and it can be costly both financially and in terms of self-image. Therefore, more research on this topic is necessary to understand the paradox of human dishonesty.

We wish to thank our supervisor Kenneth Henning Wathne for great support and guidance. Also, we want to direct a huge thank you to all who participated in our experiment for giving us a solid base for investigating this topic. Lastly, friends and family deserve some credit for patience, inspiration and encouragement.

We hope you find this as exciting as we do!

Hanne Andreassen & Saranda Hoti
Stavanger 14.06.2018

Summary

The purpose of this master thesis is to extend the current knowledge on dishonesty by adding a new dimension of cheating on behalf of others - more precisely a charitable cause. Additionally, the aim is to analyse the simultaneous effect on dishonesty of message framing in terms of gains and losses and investigate the impact of a collectivistic or individualistic mind-set on dishonest behaviour. This is a quantitative study, where we conduct a 2 by 2 experimental design with four different treatments – explicitly *Charity/Gain*, *Charity/Loss*, *Me/Gain* and *Me/Loss*, with a sample size of 120 students at the University of Stavanger. The intention with this thesis is to explore whether people are more willing to behave dishonestly when a charitable cause can reap the rewards of it, compared to oneself, and whether a loss or gain framing promotes cheating more.

The problem statement is formulated in two questions:

Are people more dishonest when the rewards are towards others compared to oneself, and how does message framing in terms of gains and losses affect the level of dishonesty? Does the goal justify the means?

The research questions that will guide the thesis are the following:

1. How much does people cheat when the risk of being caught is seemingly eliminated?
2. Do participants cheat more for a charitable cause, compared to for oneself?
3. How does framing the task in terms of gains and losses affect cheating behaviour?
4. Does a higher degree of collectivism increase the probability of cheating for charity?

The analysis leads to the following summary of findings:

- A significant number of participants cheated, however they did not cheat to the maximal extent.
- The majority of the cheating occurred when the monetary gains were directed towards oneself, as opposed to charity.
- The loss framing triggers cheating to a larger extent than gain framing.
- The framing of gains and losses has no effect when the recipient of the earnings is a charity but turns out to have an effect when the monetary gain is personal.
- The treatment *Me/Loss* is significantly different from the other treatments and have a significant positive impact on the probability of cheating.

- We find no significant evidence that participants with higher degree of collectivism would cheat more if they get the *Charity* treatment compared to if they get the *Me* treatment. A possible explanation for insignificant results can be due to low variation in the data in this sense.
- Conclusively, it appears that people are more willing to take risks and cheat to avoid personal losses rather than benefitting others - thus the goal does not seem to justify the means.
- In total, 3400 NOK was donated to the charity “Barnekreftforeningen” (see Appendix 7).

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1. Introduction

1.1 Background for choosing the assignment

In modern time, different sciences such as psychology, philosophy, sociology and economics have attempted to unlock the mysteries of the human mind and explain why we think, act and feel as we do – notably with different intents. The most recent trend in this domain is the concept of behavioural economics, where a merging of psychological and economic theories occurs to provide a deeper, more accurate explanation of various behaviours and intentions of individuals and society as a whole. It is worth mentioning that in 2017 Richard Thaler won the Noble Prize for his work within behavioural economics (Nobleprize.org, 2018). In this field, the standard assumption of rational actors in economic theory is rejected, and the notion of irrationality embraced. Economist Amartya Sen said it first - “the purely economic man is indeed close to being a social moron. Economic theory has been much preoccupied with this rational fool” (Sen, 1977, p. 336). Thus, the idea of the human mind being predictably irrational is certainly on the rise (Ariely, 2015), and provides us with an interesting starting point for our thesis.

A thought-provoking and debated topic within behavioural economics is dishonesty. Lying, cheating and stealing in some way, shape or form happens everywhere, all the time, to all kinds of people. Some people may steal the occasional chocolate bar from the local grocery store, some may cheat on a final exam, some may lie to the police at a court hearing, and some may even lie to themselves. Although general social norms and indeed laws prohibits such actions, humans often tend to bend, tweak, redefine and even break these rules in both conscious and unconscious attempts to achieve some form of utility. Remarkably, DePaulo, Kirkendol, Kashy and Wyer (1996) found that people lie in 20-30 % of their social interactions. Add this up with number of people in the world, and you get a substantial amount of lies told every day.

Several researchers have strived to tackle the dishonesty question with different results. For instance, Mazar, Amir and Ariely (2008), to mention some, have during their many experiments found that most people lie, but just a little bit, in order to maintain a positive self-image. Gneezy, Kajackaite and Sobel (2016) on the other hand, argue that a large portion of individuals will lie to the maximal extent. Nevertheless, the fact that all types of people do act dishonestly from time to time is established, however the questions revolves around how much we lie, and in

which situations dishonesty is triggered or deemed more acceptable than others. The majority of current research looks at cheating for selfish reasons – what’s in it for *me*? Therefore, this thesis will aim to take the research within dishonesty one step further, add the dimension of lying or cheating for a cause greater than oneself, and investigate if the goal in fact does justify the means.

1.2 Purpose and problem statement

The purpose of this master thesis is first and foremost to understand individual’s propensity to behave dishonestly by unveiling whether altruism or egoism, in combination with loss versus gain message framing, weighs heavier in people’s decision-making. This will be done by manipulating the receiver of the earnings from participating in the experiment; some will be able to earn money for themselves – others for a charitable cause, namely “Barnekreftforeningen”. Message framing in terms of loss aversion will be brought into the mix in order to look at the effect losing versus gaining on individuals in this setting. Moreover, the aspect of self-construal theory will be researched to see which role personality plays regarding individualism versus collectivism when making the decision to lie and cheat for others. Hence, the aim is to reveal any possible connection between a person’s orientation in thinking of others, and actual behaviour when presented a “perfect opportunity” to be dishonest and reap whatever benefits that may hold. This research can be useful for behavioural economists, marketers and strategists in understanding how to appeal to individuals when desiring to gain donations for charities, minimize the cost of dishonesty in organizations, as well as serving as a new base for further studies on cheating for the sake of others.

This thesis will measure how dishonest behaviour is connected with recipient of the earnings, loss aversion and self-construal theory by conducting a controlled lab experiment. The experiment is inspired by Ariely’s many creative ideas, and both the matrix task and the infamous shredder condition have been adopted for this thesis (Mazar et al., 2008). Further, we have developed a unique two by two design where a mix of variables that we find suitable for this topic are incorporated. The participants are students of different academic backgrounds at the University of Stavanger in Norway. By conducting this experiment, we are testing the robustness of Mazar, Amir and Ariely’s (2008) experiment, as well as its applicability in a Norwegian environment. Moreover, by adding new theoretical extensions and aspects we cast a new light on dishonesty.

The overall aim is to study the following questions:

Are people more dishonest when the rewards are towards others compared to oneself, and how does message framing in terms of gains and losses affect the level of dishonesty? Does the goal justify the means?

To answer this problem statement, some research questions have been created to contribute, guide and focus the thesis. The explicit research questions are:

1. How much does people cheat when the risk of being caught is seemingly eliminated?
2. Do participants cheat more for a charitable cause, compared to for oneself?
3. How does framing the task in terms of gains and losses affect cheating behaviour?
4. Does a higher degree of collectivism increase the probability of cheating for charity?

For practical reasons, the thesis limits its scope to the following:

- In the experiment, the focus is only on *students* at the University of Stavanger.
- The problem statement will be discussed from a consumer behaviour perspective with the background from behavioural economics.
- It is important to note that dishonesty is used as a collective term that contains lying, cheating and stealing. However, the focus on this thesis is on cheating, therefore the terms dishonesty and cheating are used interchangeably depending on the context.
- A controlled laboratory experiment will be conducted with a 2 by 2 design, where we manipulate the recipient of the earnings and message framing.

1.3 Structure of the thesis

This thesis will start by presenting some of the most relevant literature on dishonesty in an attempt to understand where current research it at today. In the theory section, we will explain the appropriate theoretical aspects necessary to further recognise the reasoning behind our hypotheses. Afterwards, the methodological approach will be explained, as well as a thorough review of our experimental design and procedure. The analysis of our results will follow, as well as a discussion where our hypotheses are examined and answered. Conclusively, our research questions and ultimately the problem statement will be addressed – does the goal justify the means?

2. Literature review

The research on dishonesty has in recent years been much dominated by creative experiments with behavioural economist and psychologist Dan Ariely at the forefront. The basis of the research was to challenge the established cost-benefit explanation of dishonest behaviour in rational economics (Becker, 1968), by introducing the term self-concept into the equation (Mazar, Amir & Ariely, 2008). Thus, the hypothesis was that people are not dishonest solely due to rational calculations based on possible gains of the dishonest behaviour, chance of getting caught and possible punishment for the action. According to psychological theory, internal rewards are vital inputs to the decision whether to be dishonest or not. It has been shown that humans internalize the norms and values of their environment, which serves as an internal benchmark, and then weighs that against their own behaviour (Campbell, 1964; Henrich, et.al, 2001). Subsequently, De Quervain et. al (2004) and Rilling et.al (2002) have found evidence of internal rewards, indicating that actions taken on behalf of social norms activate the same reward centres in the brain as external benefits. In this sense, social norms are altruistic behaviour, punishment and social cooperation, whereas external rewards are for instance food and money. Conclusively, psychological research proposes a more nuanced picture of dishonesty.

In order to challenge Becker's theory, a series of experiments were conducted where the risk of being caught was seemingly eliminated and different manipulations were added to look for behavioural changes. One of the bases of Ariely's further studies were found in their research across 6 experiments in 2008. The findings indicate that people cheat, however not to the maximum extent. Thus, results showed that on average, people cheated only 6,7% of the possible magnitude (Mazar et.al, 2008). Additionally, it was found that "in general, people were insensitive towards external costs and benefits associated with the dishonest acts, but they were sensitive to contextual manipulations related to self-concept" (Mazar, et. al, 2008, p.642). In other studies, it has been found that people are more likely to lie when they are exhausted (Mead, Baumeister, Gino, Schweitzer & Ariely, 2009), people are more willing to cheat if one from their same social group does so (Gino, Ayal & Ariely, 2009), wearing counterfeit products makes people feel less authentic and therefore increases their likelihood of cheating (Gino, Norton & Ariely, 2010), as well as that when people's self-control resources are depleted, the chance of impulsively cheating increases (Gino, Schweitzer, Mead & Ariely, 2011) and that creative people tend to be more dishonest than non-creative people (Gino & Ariely, 2012). In

contrast to the other research articles, a study conducted by Gino, Ayal and Ariely (2013) investigates the effects of being dishonest for the sake of others, and not only for one's own benefit. Their results indicate that individuals cheat more when others can benefit from their cheating, and when the number of beneficiaries of the dishonest behaviour increases. In this research, the ones who cheated the most were those who also benefitted from it themselves. Hence, moral flexibility is used to justify the self-interested actions when the actions benefit others as well as themselves (Gino et. al, 2013).

Later on, some researchers have found conflicting evidence with the above experiments. In a study done by Kajackaite and Gneezy (2015), results indicate that the cost of lying is fixed, and that if people choose to lie, they do so to the full extent. In other words, partial lying occurs infrequently. The researchers argue that the decision-maker does a cost-benefit calculation: "when the benefit of the lie is larger than the cost of lying, she will lie to the full extent; otherwise, she will tell the truth" (Kajackaite & Gneezy, 2015, p. 37). Thus, this study promotes an "all or nothing" kind of mentality regarding lying behaviour. Moreover, a study by Gneezy, Kajackaite and Sobel (2016) emphasizes the results that people lie to the full extent, in fact, 68% of the reported liars did so in their experiment. Nevertheless, a new dimension of the partial lying is discovered: more partial lies are reported when no one can observe the outcome and increases as the highest possible payoff of participating in the experiment decreases. The researches explain this phenomenon by social identity and argues that people are willing to give up some monetary gains in order to gain a stronger social identity for being honest. Hence, social identity has a significant effect on lying costs. Additionally, there appears to be a ceiling for what is considered acceptable lying behaviour: "if the payoff associated with the observed outcome is high enough, then people do not lie, and lies occur only when the payoff is below this cutoff" (Gneezy et.al, 2016, p. 40).

3. Theory

3.1 Behavioural economics

This research project focuses on how the degree of dishonesty differs depending on recipient of the earnings from participating in the experiment, message framing and self-construal dimension, using the insights of behavioural economic theory. Behavioural economics, the fashionable cross-breed of psychology and economics, has the past decade been a triumph. Notably, it has become a popular term these days, which has resulted in a misapplication of it, using the term in relation to anything perceived as “cool” in social science (Harford, 2014). Several Nobel Prizes have been awarded to researchers that have succeeded to integrate economics with psychology, and the concept has in recent years gained attention in fields like marketing, finance, political science and public theory (Samson, 2014).

The theory emerged in reaction to standard economics, where decision-makers are portrayed as rational agents and assumed to act selfishly to maximize economic gain (Hochman & Ariely, 2015). Evidence shows the contrary, it suggests that people often are impulsive, shortsighted and just plain irrational. Behavioural economics sets up the homo economicus man and beats it to death by illustrating with examples how irrational we are. The fact is, individuals do not fit within the textbook representations of humans offered by economists (Thaler & Sunstein, 2008, p. 7). Human beings are surrounded by bounded rationality such as limits on information, time available, self-control and cognitive abilities that might prevent people from making decisions that are in their own best interest. Consequently, human beings do not live in accordance with the notion that each of us thinks and chooses unfailingly well.

People rather tend to choose options that have great instant appeal at the cost of long-term happiness (Heshmat, 2017).

Thinkers have for a long time been interested in the psychological foundations of economic life (Samson, 2014). They have been seeking to figure out how people make decisions in situations of incomplete information, decision biases and limited cognitive resources in order to understand why and when people behave differently than economic models suggest. To help us make sense of these ambiguities, behavioural economists have been converging on a description of the functioning of the brain. Daniel Kahneman (2003), one of the fathers of behavioural economics, uses dual process theory as a framework to explain why our decisions and

judgments often do not comply with notions of rationality. The terminology involves a distinction between two different kinds of thinking. He introduces the terms System 1 and System 2, two ideas about human nature, in decision-making. System 1 is related with being fast, automatic, associative, effortless and instinctive. It does not incorporate what we associate with the word thinking, but is rather emotionally charged. System 2, on the other hand, is slower and more deliberate and self-conscious (Kahneman, 2003). System 1 is associated with what is known as gut reaction, and even if these feeling can be quite accurate, people make mistakes in relying too much on System 1. “Humans sometimes go with the answer the lizard inside is giving without pausing to think” (Thaler & Sunstein, 2008, p. 24). Being aware of cognitive systems and operations allows us to discover systematic biases in the way we think. In this respect, behavioural economics attempts to help and lead people toward healthier behaviours and better decisions through correction of emotional and cognitive barriers. Understanding where people take the wrong path can help people go right (Heshmat, 2017).

Dishonesty is a hotly discussed topic within behavioural economics and we will demonstrate how some irrational forces drive dishonest behaviour.

3.2 Dishonesty

The notion of dishonesty has several definitions that emphasize different aspects of the same topic, however, the bottom line remains more or less the same. One definition by Scott and Jehn (1999, p. 297) explains dishonesty as a behavioural phenomenon that “occurs when a responsible actor voluntarily and intentionally violates some convention of the transfer of information or of property, and in so doing, potentially harms a valued being”. Thus, this definition incorporates the actor, the act itself as well as well as intention and result. However, a perhaps simpler way to understand dishonesty may be to consider what honesty is, as several researchers have attempted to do previously by identifying various factors of honesty (Cunningham and Ash, 1988; Elm and Teplensky, 1992). For this thesis, however, the simple definition by the Oxford English Dictionary (1971) leaves us with the most expedient explanation, which is that honesty can be explained as not to lie, cheat or steal. In this sense, dishonesty would be those exact things: lying, cheating and stealing.

For the purpose of this thesis, it is necessary to note that although the term dishonesty contains lying, cheating and stealing, this thesis focuses first and foremost on cheating and also lying.

Firstly, although debated, a well-known definition of lying is the following: “a lie is a statement made by one who does not believe it with the intention that someone else shall be led to believe it” (Isenberg, 1973 p. 248). Hence, by lying to someone one deliberately tells an untrue statement in hope that the other person will perceive it as truth, however it does not say anything about the intentions of the “liar”. Secondly, the term cheating can be defined as: “a trait that is beneficial to a cheat and costly to a co-operator in terms of inclusive fitness when these benefits and costs arise from the actor directing a cooperative behaviour toward the cheat, rather than the intended recipient” (Ghoul, Griffin and West, 2014, p. 319). According to Ghoul et al. (2014) this can be done by either intercepting cooperation or manipulating others for own gain and has the consequence of being a cost to the recipient. Conclusively, the telling of a lie is a form of deception, whereas the act of cheating can be said to be the breaking of a mutual agreement.

Before attention was directed at irrational behaviour among consumers, the rational economies provided a plausible explanation as to why people choose to act dishonestly. Economist Gary Becker (1968) introduced a model of crime and punishment, where people are assumed to deliberately weigh the benefits of being dishonest in a given situation (the possible gain) against the probability of receiving a punishment as well as which punishment would be received (the possible loss) for those actions when making a decision to commit a crime or a dishonest act, in order to maximize personal utility. This theory has been called the Simple Model of Rational Crime (SMORC) and has in later years been challenged by behavioural economist Dan Ariely who argues that SMORC does not provide an accurate picture of the causes of dishonesty. According to Ariely (2012, p. 8), if we truly lived in a SMORC world, we would never make decisions based on emotions and trust, which means no trusting the neighbour, no value in shaking hands over agreements, always locked doors and all your cash hidden under the mattress. Therefore, Ariely has through numerous studies attempted to unveil what he believes to be the real causes behind dishonest behaviour, and found that we all cheat and lie, however only enough to not impact our positive self-image. Hence, people usually only lie to such an extent where they still can feel good about themselves after doing so, which is referred to as the “fudge factor theory” (Ariely, 2012, p. 18). Moreover, different scenarios have been studied in order to further understand the dimensions of this issue as presented in the literature review section.

3.3 The self

In order to understand individuals, an outlook on “the self” is essential. The self can be explained as what one is aware of, the attitudes and feelings one possesses, as well as one’s perceptions and evaluations of oneself as an object (Hall & Lindzey, 1962). Who we are, or more precisely who we think we are, strongly influences how we behave. Furthermore, the extent of value placed on “the self” suggests how consistent one will be with his or her behaviour (Grubb & Grathwohl, 1967). Thus, an individual’s self-image will often be reinforced through one’s actions. Notably, there is a difference between who we actually are, who we think we are, and who we want to be, meaning that people have a variety of images of themselves. Historically, individuals are thought to have a single self-image or sense of self, however Markus and Nurius (1986) suggests considering individuals as having multiple selves. This notion says something about humans acting differently in different situations, as a result of their environment adapted self-image. According to Schiffman, Kanuk & Hansen (2012), a variety of self-images have been discovered in consumer behaviour literature. The actual self-image is how the consumer in fact see themselves, the ideal-self-image is how consumers would like to see themselves and the social self-image is how consumers feel others see them (Schiffman et al., 2012). Conclusively, our sense of self and the situation we are in determines our behaviour.

In the context of dishonesty, Mazar et al. (2008) propose that the internal rewards system can control behaviour by influencing individual’s self-image. The internal reward system has been explained by psychologists as people, in part of socialization, internalizing norms and values of society, which serves as an internal benchmark against which a person compares his or her behaviour (Campbell, 1964). If one complies with the norms and values it generates positive rewards, and if one does not comply it leads to negative rewards. Further, it has been shown that individuals normally value honesty, that they have strong beliefs in their own morality, and want to maintain this aspect of their self-image (Mazar et al., 2008). Hence, if people behave dishonestly, it will impact his or her concept of oneself in an unfavourable manner. Mazar et al. (2008) presents the concept of an equilibrium on a dilemma people often face with two opposing motivations; gaining form being dishonest versus preserving a positive self-image as honest. This means that there may be an optimal amount of dishonest behaviour that will allow for an individual to upkeep a positive self-image.

3.4 Egoism

The phenomenon of egoism is well-known in both psychology and economics and is often used about the human tendency to be motivated by selfish motives. According to Feinberg “psychological egoism is the doctrine that the only thing anyone is capable of desiring or pursuing ultimately (as an end in itself) is his own self-interest” (Feinberg, 2013, p. 167). This implies that humans are in fact not capable of anything else. Although the act may appear as in someone else’s best interest, a psychological egoist will argue that this only is possible if the selfless act is ultimately a mean to achieve a self-interested goal (Feinberg, 2013, p. 167). Hence, this theory claims that anyone saying they are not doing it for themselves, are deceiving themselves, meaning that there is no such thing as altruism (which will be presented in the section below). Several motives can be called selfish and linked to each of these is a plausible version of psychological egoism. A well-known one is the version of Bentham and is referred to as psychological egoistic hedonism. This theory says that all individuals have one superior motive in any voluntary action, and that motive is to gain pleasure and avoid pain, at any cost (Feinberg, 2013, p. 167). In the context of helping others, “egoistically motivated helping is directed toward the end-state goal of increasing the helpers own welfare” (Batson, Duncan, Ackerman, Buckley & Birch, 1981, p. 291). Nonetheless, the psychological egoists have some critiques. Batson, O’Quin, Fultz, Vanderplas and Isen (1983) found evidence that awakening empathy in a person does motivate him or her to help other selflessly, which can be described as altruistic behaviour.

3.5 Altruism

On a more positive note on behalf of the human mind, the theory of altruism enters the debate, which can be thought of as being the opposite of egoism. According to Batson (2011), altruism can be defined as a motivational state where the ultimate goal is to increase another individual’s welfare. Altruists do not deny the existence of selfish motives; however, they do believe that there is something more. They claim that for some individuals, under some circumstances, it is possible to have a different kind of motivation that has a final aim of benefitting someone else (Batson, 2014). However, the notion of pure altruism has been challenged, and Becker (1974) found evidence that apparent charitable behaviour also can be motivated by a desire to avoid disrespect of others or to receive social praise. Based on this discovery and other research, Andreoni (1990) introduced the impure altruistic model in a proposition to understand charitable behaviour. In the economic model, Andreoni distinguishes between being purely

altruistic (nothing in it for the actor), to be purely egoistic (actor is only motivated by a feeling of warm-glow) or impurely altruistic (actor is motivated by both of the above). The model suggests that the act of giving increases utility through the added value from the warm-glow argument. The expression “warm-glow” refers to prosocial behaviour that causes the individual actor to experience positive feelings, apart from its social implications (Evren & Minardi, 2017). Thus, there is an extra benefit of doing good deeds for the person doing it – simply to get a good feeling about themselves. Henceforth, social pressure, sympathy, guilt or simply a desire for a “warm-glow” may be important factors in individual’s decision-making on this topic (Andreoni, 1990). This discovery adds another dimension to the altruism-egoism debate, proposing a more complex term that combines selfish and altruistic motivations.

3.6 Message framing

Individuals vary in their ways of thinking and respond differently to messages and information depending on how they are framed. Message framing has gained much attention in the literature lately, and is now one of the most commonly manipulated features being used to influence behaviours and attitudes (Maheswaran & Meyers-Levy, 1990). By studying this field, Kahneman & Tversky (1979) developed a ground-breaking study where they demonstrated that the way in which a message is framed has an effect on the amount of the persuasion it elicits. The concept of message framing refers to communication in different words, settings and situations for the purposes of conveying information about an issue or happening. Framing information differently, in terms of what it highlights, will have a powerful impact on decision-making (Kahneman & Tversky, 1979). This effect is an example of a cognitive bias, where different representations of the same message give rise to dissimilar human decisions. These dissimilarities are explained by introducing two equivalent value outcomes, either in positive terms or in negative terms – also known as gain and loss frames, respectively. It is thought that the pain of losing something makes you twice as miserable as the pleasure of gaining the same thing. This phenomenon has been called “loss aversion” and is an important behavioural economics concept associated with prospect theory. The phenomenon is encapsulated in the expression “losses loom larger than gains” (Kahneman & Tversky, 1979, p. 279). In more technical language, people are loss averse and are therefore more sensitive to minor losses than to minor gains. However, research that has been undertaken indicates that positively and negatively framed messages are seen to be effective in different situations. For instance, people tend to seek risk when a negative frame is presented as opposed to a positive frame. Hence, it

has been found that loss framing is more efficient in changing behaviours that are associated with risk, while gain framing is more efficient within safe behaviours (Kahneman & Tversky, 1981). Nevertheless, the results of research that has been undertaken to examine the effectiveness of gain-framed and loss-framed persuasion are far from clear and equivocal as the evidence suggests different results in different contexts.

Loss aversion has further been used to explain endowment effect, which is another explanation to why losses are felt twice as severely as an equivalent gain. In line with the endowment effect (Kahneman, Knetsch & Thaler, 1991), once ownership of an object has been established, people ascribe more value to it. Hence, forgoing that object is weighed more heavily than acquiring it; therefore individuals try to avoid a loss rather than pursuing the same gain. Giving up something feels like a loss and humans are loss-averse. The theories of loss aversion and endowment effect explain irrational tendencies for humans to overweight losses gives rise to cognitive biases, as people's fear of loss confuses their decision-making.

3.7 Self-construal theory

There are considerable individual differences within cultures with respect to how people think of one in terms of relationships with others. Due to these cultural differences of where people are categorized in the collectivist and individualist dimension, many interdependent self-construal scales have been developed to measure the two dimensions of self-image.

Markus and Kitayama's (1991) theory of self-construals introduced a new way to interpret individual consequences of cross-cultural dissimilarities and became an extremely influential perspective in cross-cultural psychology. The theory examines the connection between the individual self and the cultural and social setting and is considered as the first social psychological attempt to conceptualize this relationship (Voyer & Franks, 2014). It stresses how people understand who they are relative to the broad set of cultural influences in which they live.

In our context a new measure, Relational-Interdependent Self-Construal (RISC) scale, will be used instead. Following concepts introduced by cross-cultural psychologists such as Markus and Kitayama (1991), three studies conducted by Cross, Bacon and Morris (2000) identifies a basic dimension to investigate the nature of interpersonal relationships. The scale is used to

measure how individuals differentiate how they think about themselves considering which elements of the social world are included in the self, and in terms of relationships with close others. This scale differs from earlier scales because it directly measures interdependence and is intended to offer a better measurement of the relational-interdependent self-construal than current measures (Cross et al., 2000).

Cross et. al (2000) found that among the many cultural constructs, the one that had great impact on the self was the individualism and collectivism dimension. A higher score on the RISC scale, being collectivistic, indicates that individuals identify their relationships as close, important and more committed as compared to those who score low on this measure. Thus, individuals are understood as agents who depend on others and have the need to accommodate to others. The “self” is perceived as flexible and is intertwined with social context including close relationships in their self-concepts. They are open and responsive and more likely to take into account the concerns, needs and wishes of others when they take decisions. On the other hand, a lower score on the RISC scale, being individualistic, indicates that the “self” is understood as an autonomous and unitary agent who strives for uniqueness. They do not find relationships important as to how they think of themselves, because they have the need to establish themselves separately from social context.

4. Research method

This section of the master thesis addresses the choice of research method and its characteristics.

4.1 Methodological approach

According to Yin (2002) there are two common methodological approaches in scientific research, known as qualitative and quantitative. These two different methods examine diverse aspects of reality, but what determines which approach will be used in the actual research project is the research question of interest (Jacobsen, 2005). The qualitative approach is most beneficial when the objective is exploration of ideas and insights and open types of research questions, where the aim is to investigate a specific question in “depth with careful attention to detail, context and nuance” (Patton, 2002, p. 257). Quantitative method on the other hand is normally used to find knowledge that is explaining and can be generalized (Starrin & Svensson, 1994). The approach produces data that can further be analysed by using statistics, because the phenomena that are being investigated are measurable.

In this research project, the aim is to extend the current knowledge of dishonesty, by addressing two issues; 1) do people cheat more when gains are towards others, and 2) how does the gain and loss framing affect level of cheating. Additionally, self-construal dimension will be measured to investigate how a specific personality trait affects cheating behaviour. Thus, the quantitative approach has been chosen to investigate these relations and to answer the problem statement and the research questions.

4.2 Research design

The sources of information for a study and the research design go hand in hand as they both depend on how much is known about an issue (Churchill & Iacobucci, 2015, p. 25). Research design is the framework for a study, relating the research problem to relevant and practicable empirical research (Churchill & Iacobucci, 2015, p. 57). Thus, the design ensures that the study will be relevant to the problem in order to answer the research questions correctly. The most common research design frameworks are classified into three types: exploratory, descriptive and causal. Exploratory research emphasises the discovery of ideas and insights of research problems with unstructured problem structure and is therefore not suitable for this study. The major emphasis of descriptive research is on determining the relationship between two variables where the research problem is structured, but since data is collected without manipulating the environment, this type is eliminated as a proper design in the case of measuring the degree of dishonesty. Lastly, a causal research design determines the cause-and-effect relationships that are studied via experiments, which is one of the best methods to reveal causal relationships between variables (Churchill & Iacobucci, 2015, p. 57). Since this study requires some manipulations of the environment in order to see the effects of the independent variables on dishonesty, the causal research design is considered as the optimal and most effective approach to investigate these effects.

For the reasons discussed above, the methodological procedure undertaken to answer the research questions will be through a controlled laboratory experiment conducted at the university campus. Experiments are one of the best research methods to reveal possible causal relationships between variables by allowing manipulation of independent variables in order to observe possible changes in the dependent variable (Cooper & Schindler, 2013). This type has proven to be useful because of its replicability (Falk & Heckman, 2009, p. 535), and is considered to be more convenient for our experiment than the field setting as it helps to isolate

possible variables influencing participants' dishonesty and measure only the effects of interest. Accurate measurements are possible, and participants are randomly assigned to each independent variable group. By using a standardized procedure, we have been free to choose where the experiment will take place, in what circumstances, at what time and with which participants.

This type of experiment is established as a popular and effective tool for provision of practical insights to classical and modern theoretical approaches. However, it has its shortcomings. The most common shortcoming is its external validity where the artificiality of the setting may produce unnatural behaviour that does not reflect real life. This puts a question mark to the extent the results can be applied and generalized to a real-life setting (Cappelen & Tungodden, 2012). What is known as the observer effect may also bias the results where participants change their behaviour in response to their awareness of being observed and try to act as expected to (McLeod, 2012). Further, we only observe test subjects' actual behaviour, but we are not sure about the reasoning behind this behaviour. Another thing worth thinking about is that subjects receive weak monetary incentives. Hence, it cannot model participants' decision making in economic situations in real life to full extent (Cappelen & Tungodden, 2012).

4.3 Primary data

For this research, primary data have been collected directly through the experiment to get the necessary data for the analysis. Primary data are originated by the researcher for the purpose of the immediate investigation at hand (Iacobucci & Churchill, 2015, p.137). Additionally, existing body of literature and prior experiments conducted on the topic have been used to analyse and discuss the results.

5. Experimental design and procedure

This experiment has the aim of investigating how manipulating the receiver of the earnings and how the message is framed, affects level of cheating. In addition, the self-construal scale is included to explore any correlating effects between a personality trait and cheating. This experiment is a replication of Mazar et al.'s (2008) experiment, as it is the original experiment using the matrix setup to explore what makes us dishonest. The original experiment contains a series of twenty matrices and has two conditions, control condition and shredder condition.

Results in the control condition, where cheating was impossible, was compared to the reported performance in the shredder condition, in which cheating was possible.

In the original study (Mazar et al., 2008) a set of 20 matrices were used. In our version, the decision to only have 10 matrices was taken for incentive and budget reasons, as we wanted to be able to give 10 NOK per solved matrix and had a maximum budget of 100 NOK per participant. Further, different treatments have been introduced to the study, constituting four treatment groups, *Charity/Loss*, *Charity/Gain*, *Me/Loss* and *Me/Gain*, which will be described in more detail in section 5.4 below. We run a controlled laboratory experiment where participants were given test sheets where they had 5 minutes to find two numbers per 10 matrices that add up to 10. The whole experiment lasted for approximately 15 minutes, and each test subjects were greeted to separate desks where they received one of four treatments and performed the tasks.

5.1 Recruitment

The experiment was conducted at the campus of the University of Stavanger, Norway, April the 11th, April the 12th, April the 13th and April the 23rd. Participants were recruited through their student email accounts where formal e-mail invitations were sent with help from the IT department and the Business School department at UiS (see Appendix 2). Students signed up for the experiment by using Qualtrics, by a link attached in the invitation. In Qualtrics 6 sessions were available for each day, with a quota of max 10 participants for each session. Students could freely choose a desired date and time for participation, as long as the limit was not reached. The day before each session we sent a follow up mail to all registered students in order to remind them of the time and place of the experiment. A problem that occurred was that not everyone that registered showed up, and in order to fill up all the places one of us made sure to get people randomly in at the end of each day. The experiment was also announced through various communication channels like Facebook, word of mouth and posters on school walls.

5.2 Procedure and task

5.2.1 Elements of the experiment

In order to understand the procedure of the experiments, explanations of some elements are necessary: the shredder condition, the ID number and the set of sheets handed to the participants.

The shredder condition is based on the original study done by Mazar, Amir and Ariely in 2008, and the aim was to replicate the illusion of a “risk free” environment of getting caught cheating that they created. In order to do so, two low-budget shredders were bought and tampered with, meaning that the blades supposed to shred the paper in the middle were removed. As a result, the shredder only shredded the sides of the papers, leaving the information on them intact to be viewed later on. The shredders are not transparent; hence the participants could not know that the papers they delivered were in reality not being fully shredded. Notably, the task sheet was designed to fit perfectly into the shredder’s blades.

An ID number was located at the bottom of each sheet, and each set of sheets had a unique ID number to match the participants’ number (ranging from 1-120 participants). This made it possible for the experimenters to pair the sheets up again after the experiments to detect cheating and links with level of cheating and for instance demographics or the self-construal scale. To not bias the results, it was important to keep the ID number somewhat hidden for the participants. The ID number was therefore written in this manner (*italic text below*), where the two final digits indicated the participants number. Thus, this number would be the same across the set of sheets each participant got. This is an example of an ID number for participant number 1.

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The set of sheets for the participants were beforehand placed at each desk. Three different sheets were given, whereas the first sheet (hereby sheet 1) included the introduction at one side, where the task and frame were explained, and the task itself was presented at the back of the paper (see Appendix 1.1-1.5). The second sheet (hereby sheet 2), included the number of solved matrix tasks, as well as the receipt for the accounting department as UiS (see Appendix 1.6-1.7). This was necessary for us to receive the funding after the experiments. The third sheet

(hereby sheet 3) included the self-construal scale on one side, and a short demographics questionnaire on the other side of the paper (see Appendix 1.8-1.9).

5.2.2 The task

The task the participants were given is based on the original study by Mazar, Amir and Ariely conducted in 2008, where they use a matrix task as illustrated in figure 1. The task is to find two numbers that adds up to ten in each matrix. Mazar et. al (2008) argues that this type of task makes it possible for participants to know themselves when they have found the correct answer, hence, no answer sheet is necessary. Moreover, this eliminates the risk of hindsight bias (Fischhoff & Beyth, 1975). Additionally, this task was chosen as it is challenging and demands some time spent thinking at each matrix.

1.69	1.82	2.91
4.67	2.81	3.15
5.82	5.06	4.28
6.36	7.19	4.57

Figure 1 – Matrix task

5.2.3 The procedure

As participants entered the room, they were greeted by Experimenter 2 and told to take a seat at the desks where a set of sheets were located. The number of participants in each experiment ranged from 2 to 10, depending on how many had signed up to participate at each available time. As all participants had taken a seat, Experimenter 1 held a short introduction saying the same as written on the introductory part of sheet 1, as well as to not look at the other sheets until told so. At the desks, the sheets were organized so that the introductory part of sheet 1 was lying upwards, and sheet 2 and 3 lied further up on the desk with the blank page of page 2 upwards. Hence, the content of sheet 2 and 3 was concealed to the participants. When the participants agreed to having understood the assignment, Experimenter 1 started the stopwatch and gave the participants 5 minutes to solve the matrices. After these 5 minutes passed, participants were told by Experimenter 1 to stop solving, and bring sheet 1 up to herself and Experimenter 2 for those to be shredded. They were also told to go back to their desks after completion of this. Sheet 1 (see Appendix 1) contained a reminder for participants to remember the number of solved matrices. This was also said orally by Experimenter 1. Both Experimenter 1 and Experimenter 2 had one shredder to avoid a line and spending too much time shredding. It was also important to have two shredders, in case one of them would break down during the experimental period. When all the participants were seated again, Experimenter 1 told them to turn and fill out sheet 2 (the receipt), and afterwards fill out sheet 3 in their own time. It was on

sheet 2 the participants reported how many correctly solved matrices they had. Notably, we found it important that the reported number of matrices was written down before the self-construal scale was done, in order to avoid any bias in cheating behaviour. After completing sheet 2 and 3, participants were to come up to the desk and deliver the receipt directly to Experimenter 1 or 2 and put sheet 3 in a box at the middle of the desk. In the treatment where participants could earn money for themselves, the Experimenters handed out cash by looking at the reported amount at the receipt.

During the experimental period, three different rooms in Arne Rettedal were used (AR V-208, AR G-201 and AR G-202), nevertheless the set-up of the classroom was the same and is illustrated in figure 2 below. Moreover, the room was designed so that the participants would not feel that others could see what they were doing, with sufficient distance and spreading of the desks. Scripts for what to say and how to greet individuals were made, so that everyone got the same experience.

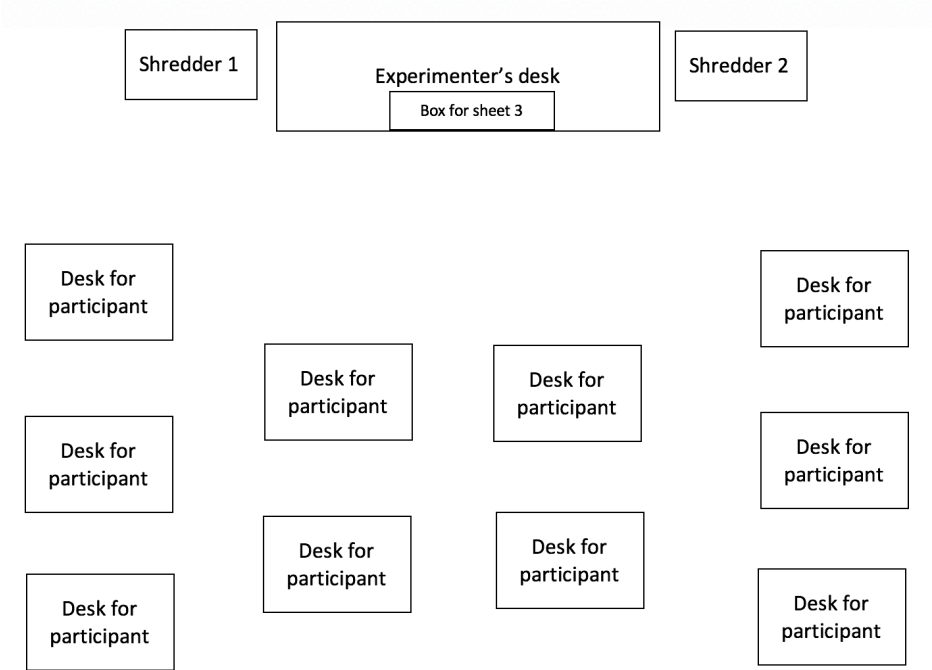


Figure 2 – Classroom set-up

5.3 Treatments

In the experiment there were four different treatment groups, as shown in the four-folded Figure 3 below. As components have been added this is a modification of the original study and the experimental setup has now a two by two factorial design, meaning that the effect of two different independent variables against a single dependent variable will be tested. This makes it possible to get four different sets of conditions and allow us to measure the effects of the independent variables on the dependent variables (Trochim, 2006). The treatments differ depending on who earns the money and how the message is framed. Students categorized within the top left and top right box can earn money for themselves, whilst the money earned by students in the bottom left and bottom right treatment is going to be donated by us to the “Barnekreftforeningen”. In both the *Me* and the *Charity* condition there is one treatment that looks at the effect of a negatively framed message and the other on the effect of a positively framed message on the level of cheating. In the *Gain* framing condition, test subject were told that each task solved will be rewarded with 10 NOK, whilst in the *Loss* framed condition they were told that they start with 100 NOK and will lose 10 NOK for every unanswered task. Thus, we have the following four treatments; *Charity/Loss*, *Charity/Gain*, *Me/Loss* and *Me/Gain*. Participants were randomly assigned to one of the conditions where we manipulated who received the money and the message framing. By doing this, we investigate how level of cheating is affected by altruistic vs. egocentric motives, and the effect of the framing of the task in terms of gains and losses.

	<i>Gain</i> Gets +10 NOK for right answer (max. 100 NOK per person)	<i>Loss</i> Starts with 100 NOK per person, loses 10 NOK for every unanswered task
<i>Me</i> The students get the money for themselves	30 students	30 students
<i>Charity</i> The money the student earns will be given to “Barnekreftforeningen”	30 students	30 students

Figure 3 - Treatments

5.4 Hypotheses

Based on the theory presented earlier, the following main hypotheses will be further investigated in the analysis.

Hypothesis 1 – Participants will cheat, but not fully utilize their cheating potential.

We believe that the participants will cheat, however not to the payoff maximizing extent. This is based on the proposed theory of self-concept maintenance (Mazar et al., 2008) and the suggested equilibrium of gaining from being dishonest whilst preserving a positive self-image as honest, meaning that people still want to feel good about themselves. Several experiments (Mazar et.al, 2008) find the tendency that people only cheating marginally when presented with the opportunity to cheat, and we expect the same tendency in our experiment.

Hypothesis 2 – The majority of the cheating participants will appear in the Charity treatment, compared to the Me treatment.

Based on the model of impure altruism (Andreoni, 1990), we believe that the participants will feel more justified to cheat in the *Charity* condition compared to the *Me* condition, where the motive is purely selfish. This is due to the theory of warm-glow, which Andreoni (1990) presents as the good feeling you get yourself for doing something helpful for others. Moreover, the research of Gino et. al (2013) finds that people are more willing to be dishonest when it is also for the sake of others. Therefore, we hypothesize that the immoral act of cheating is more defensible for the participants when it is done for a moral cause.

Hypothesis 3 – The majority of the cheating participants will appear in the Loss treatment, compared to the Gain treatment.

Building on prospect theory developed by Kahneman and Tversky (1979), we believe that students who are presented with the negatively framed information about monetary gains, are more likely to cheat compared to students in the gain treatment. This assumption stems from two central concepts within prospect theory, namely loss aversion and endowment effect. Loss aversion refers to individual's tendency of fearing loss twice as much as they enjoy an equivalent gain. This corresponds with the theory of endowment effect, the fact that people overvalue something once personal ownership has been acquired (Kahneman, Knetsch &

Thaler, 1991). Hence, we expect that these two phenomena will have similar effect in our case and be the reason for a higher cheating behaviour in the *Loss* treatment. Students will be willing to take risks and cheat to avoid losses they could prevent.

Hypothesis 4 – Higher degree of collectivism among participants increases the probability of cheating if they are in the Charity condition

Based on the theory of Relational-Interdependent Self-Construal (RISC) scale developed by Cross, Bacon and Morris (2000), we assume that the cheating behaviour among collectivistic students will increase when they get the *Charity* treatment. They characterize collectivistic individuals as being caring and compassionate that emphasizes cohesiveness. Thus, more collectivistic participants are willing to sacrifice their morality for the sake of benefitting someone else. Their generosity will make them more motivated and positive towards charitable giving and social causes, as that will be the best for the society. There may be an association between these personality traits and charitable behaviour, and therefore one could expect collectivistic participants to cheat more for charity, compared to students that are more individualistic.

6. Analysis and results

This section will present the results of the data and the key findings. Firstly, a short descriptive statistics summary about demographics and cheating will be presented. Afterwards, focus will be directed towards assessing significant differences between groups and conditions by using statistical techniques and principles. The attention of the analysis is paid on the research questions and hypotheses stated before. Using IBM SPSS software package and MedCalc's online statistical calculators the following analysis was conducted.

6.1 Sample and descriptive statistics

To get a representative sample, the participants were recruited from the student base at the University of Stavanger, notably from various faculties and different study levels. Regarding gender, our sample of 120 participants gained a 43,3% share of females, and 56,7% males, as shown in Figure 4. Moreover, the age span of the participants ranged from a minimum age at 19, and a maximum age at 53. The mean age is 24 years old, and the vast majority (79%) of the

participants are between the age of 19 and 25. In the four different treatments, the mean age was quite similar across all, with a mean age of 25,5 in *Charity/Gain*, 22,5 in *Charity/Loss*, 24 in *Me/Gain* and 22,8 in *Me/Loss*.

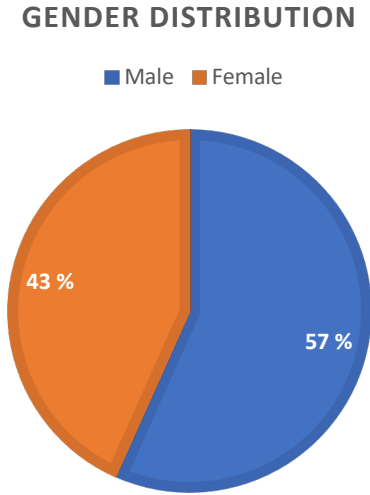


Figure 4 – Gender distribution

The academic background of the students was not accounted for in the recruitment process, hence the following distribution (Figure 5) is random and the sample is not evenly distributed on this level. Thus, the sample contained the majority of its participants from the Business School at UiS (43%), as well as substantial portions from the Faculty of Mathematics and Natural Sciences (18%), Faculty of Social Sciences (15%) and the Faculty of Education and Humanities (22,5%). Additionally, the study level of the participants shows that 44% and 47,5% were on bachelor and master level, respectively. The remaining 8,5% were students on a single-year programme.

FACULTY OF THE PARTICIPANTS

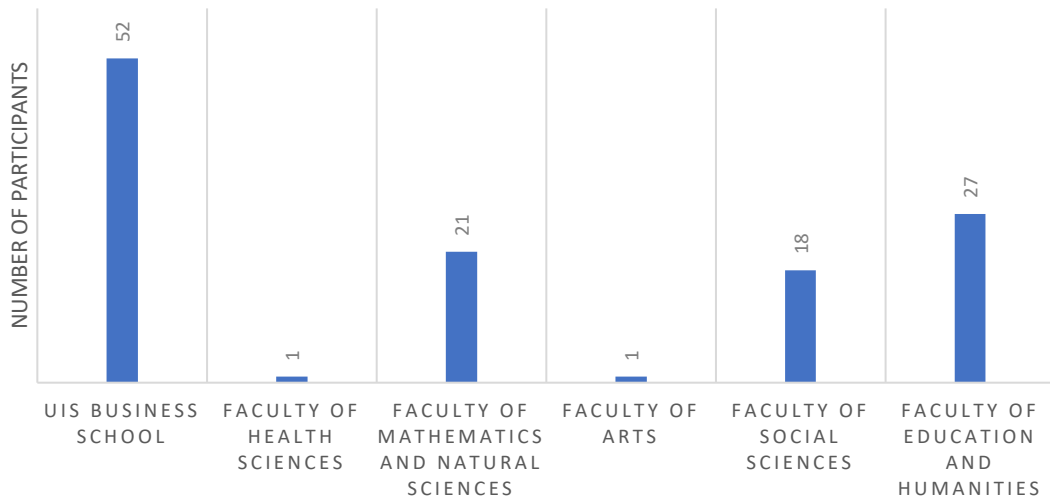


Figure 5 – Faculty distribution

6.1.1 Cheating and descriptive statistics

From the experiment there were a total of 51 participants who chose to cheat on their matrix tasks by reporting a higher number of completed tasks than actually completed. This constitutes a percentage of 42,5% cheaters in our sample. Hence, this establishes that a high number of cheaters indeed was present. The distribution of cheating and non-cheating behaviour is shown in the Figure 6 below.

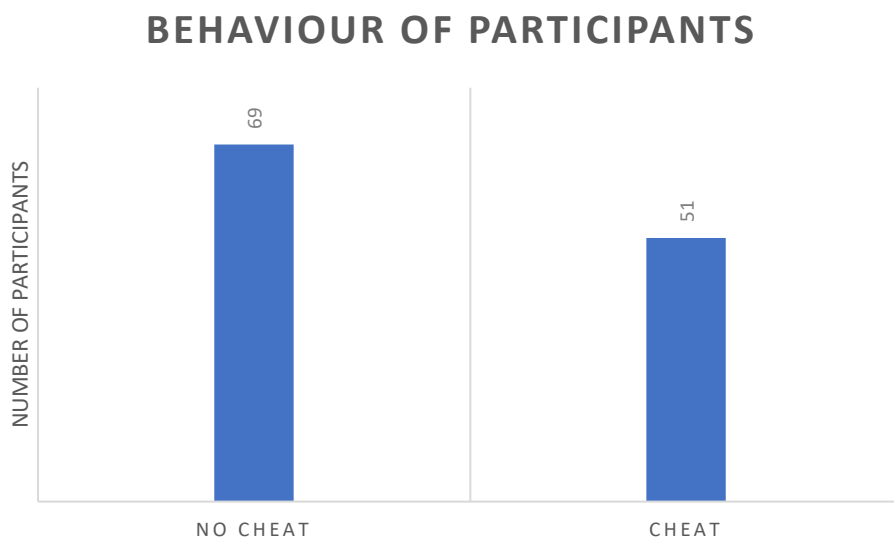


Figure 6 – Behaviour of participants

Subsequently, the question of how much the participants chose to cheat arises. The participants had 10 matrix tasks to solve in 5 minutes. Those who could for instance not manage to solve a single matrix, could still report a number of 10 solved matrices and get away with it. Figure 7 below shows number of actual solved matrices on the horizontal axis, and number who chose to cheat on each value of the actual solved matrices on the vertical line. This figure shows a clear tendency of decreasing cheating behaviour as the number of actual solved matrices increases.

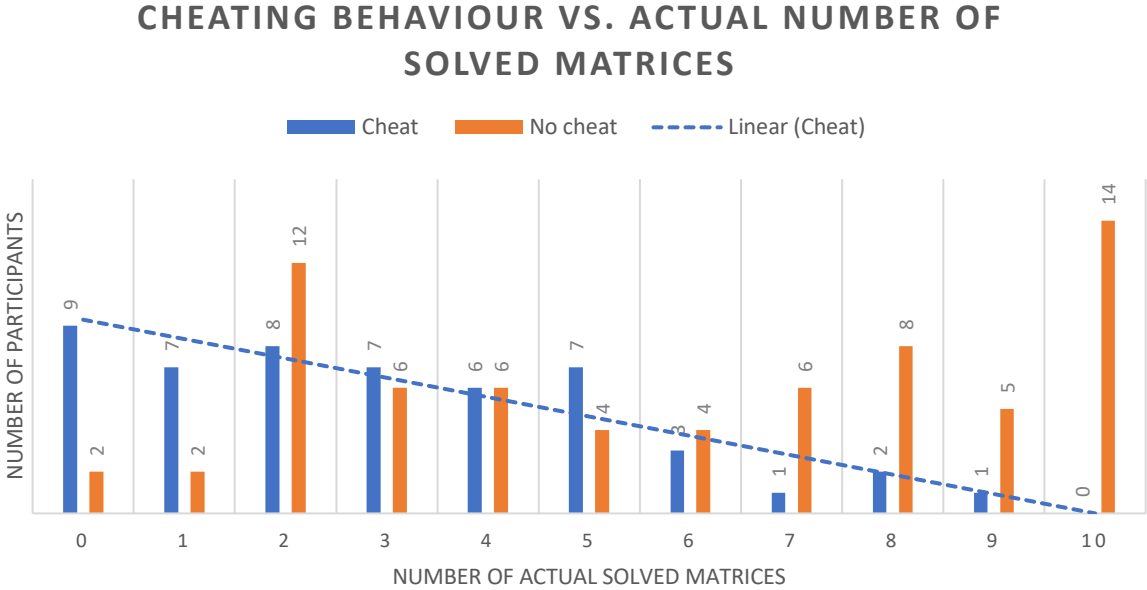


Figure 7 – Cheating behaviour vs. number of solved matrices

Thus, it is logical to think that as the number of actual solved matrices decreases, the potential to cheat increases, and the outcome of Figure 7 is thereafter. By looking at the difference between the reported number of matrices solved, versus the actual matrices that were solved, level of cheating of the participants is obtained. By combining level of cheating with the actual number of solved matrices, we gain insights into by how much the participants at each level of actual solved matrices chose to cheat. This reveals that 80% of the participants that cheated, only cheated by adding 1, 2 or 3 matrices to their reported answer. Moreover, Table 1 shows the proportion of the cheaters who only cheated by 1-3 matrices, among the participants who actually solved 0-5 matrices. The portion from 6-10 is not included as the potential to cheat is lesser. Hence, it does not appear that the participants cheated to the maximum extent.

Actual solved matrices	% of cheaters who cheated with 1-3 matrices
0	78 %
1	57 %
2	62,50 %
3	86 %
4	100 %
5	86 %

Table 1 – Cheating behaviour extended

Now it has been established that a substantial portion of the participants did cheat, as well as that the majority of the cheaters only cheated by 1-3 matrices and not utilizing their full cheating potential. Next up is investigating who the cheaters are by running crosstabulation matrices. This is a test that presents the frequency distribution of categorical variables and is used to explore the relationship between these variables by (Pallant, 2013, p. 228). By using the variable *Cheat* and demographic factors as chosen variables, the following information was revealed.

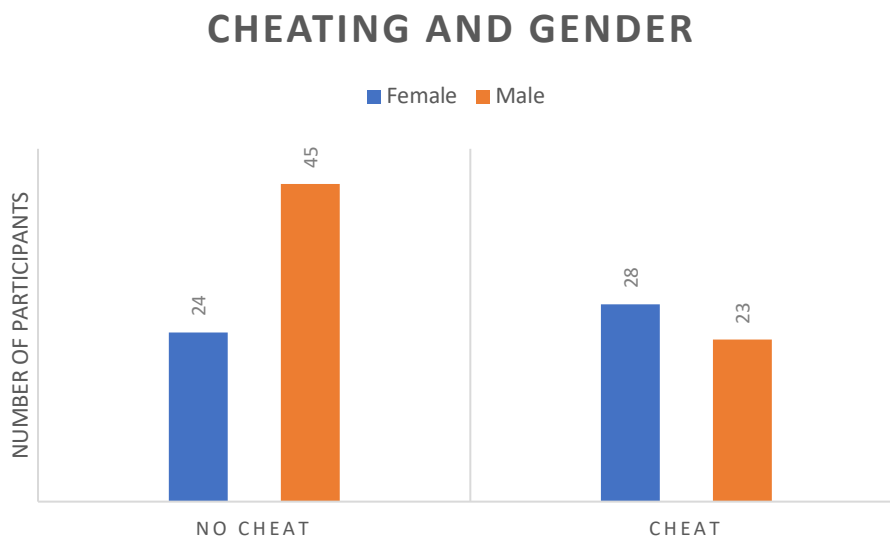


Figure 8 – Cheating and gender

Figure 8 displays the gender distribution on dishonest behaviour. In our sample, 54% of the females cheated compared to 34% of the men. Regarding cheating based on faculties, the comparison is trickier to make as the distribution is skewed. Nonetheless, it can be argued that there is a tendency towards slightly less cheating in the Faculty of Education and Humanities. In this faculty, only 26% cheated, compared to the Faculty of Social Sciences, Faculty of

Mathematics and Natural Sciences and the UiS Business School, where 44,4%, 52% and 48% cheated, respectively (see Appendix 5).

6.1.2 Cheating in treatments

As described in section 5.3 we have four different treatment groups; *Charity/Loss*, *Charity/Gain*, *Me/Loss* and *Me/Gain*. When running a crosstabulation of cheating and the four conditions as chosen variables, it turns out that number of respondents who chooses to cheat is the same in *Charity/Loss*, *Charity/Gain* and *Me/Gain*, approximately 1/3. The condition that sticks out is *Me/Loss* where 2/3 of the respondents are willing to cheat, which can also be seen in Figure 9 below. This means that the three first treatments have the same effect on people's behaviour as people act similarly. Hence, the outcome is identical unless students were given the *Me/Loss* treatment, where they act differently.

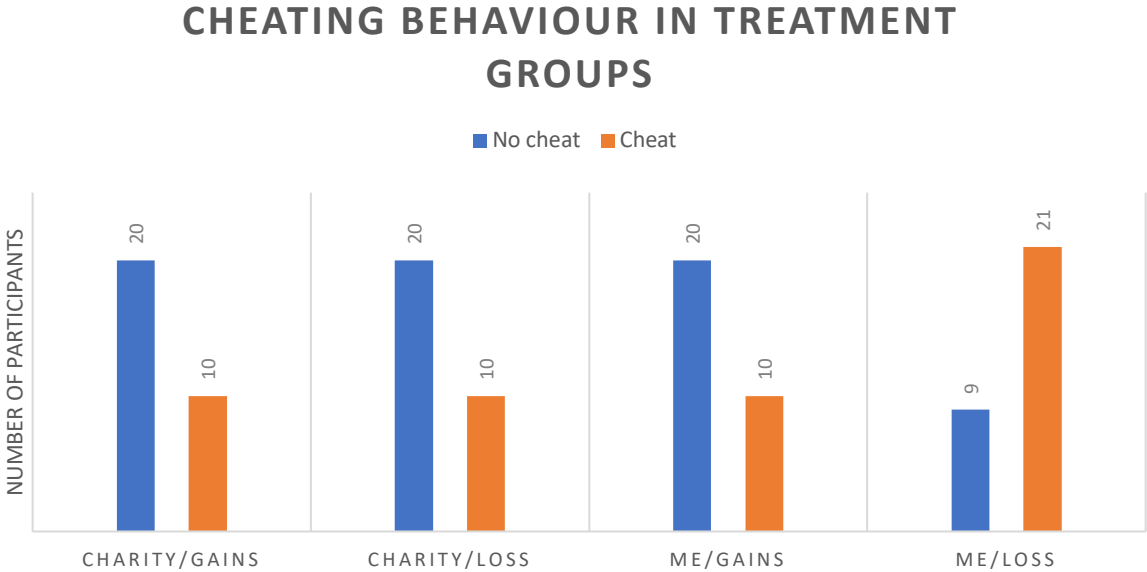


Figure 9 – Cheating behaviour in treatment groups

6.2 Key variables

This section will provide an explanation of the key variables used in the analysis. There are two dependent variables: cheat and dishonesty, as well as three main independent variables, namely receiver, frame and self-construal level. Other control variables, such as demographics, will also be included.

6.3.1 Dependent variables

In this thesis, the dependent variables are the actual cheating behaviour (cheat or no cheat) and the magnitude of the cheating (level of cheating). The distribution of these (number of cheaters, and magnitude of cheating) are described previously in the descriptive section.

The dependent variable *CheatContinuous* is used to find the magnitude of cheating among the cheaters (and non-cheaters). This variable is continuous and measures the level of cheating behaviour. Moreover, this variable was created on the basis of subtracting the number of actual solved matrices from the reported number. Thus, *CheatContinuous* gives the magnitude of matrices the participants cheated with as the value for the variable. For instance, if the participant did not cheat they get 0, if they cheat by one matrix, they are assigned the value 1, if they cheat by two, they get the value 2 and so forth. This leaves the range of possible values for this variable 0 – 10, depending on how many matrices the participants chose to falsely report as solved. On the other hand, the dependent variable *Cheat* is used to find the quantity of cheaters in our sample. This is a binary variable, that takes the value 0 if a participant did not cheat, and the value 1 if they did (disregarding the extent). The variable was also created by subtracting the number of actual solved matrices from the number the participants reported they solved and give all who had a difference between those the value 1 in cheat.

6.3.2 Independent variables

For the analysis, the independent variable *Receiver* indicates whether the participants were told the monetary gains would go to themselves, or to the charitable cause “Barnekreftforeningen”. Hence, receiver is a binary variable that can take two values, either 0 = *Charity*, or 1 = *Me*. Moreover, the independent variable *Frame* is also binary, and indicates whether the participants got a *Loss* or *Gain* framing when they were presented with the task. For the framing variable, the coding states 0 = *Gain* and 1 = *Loss*. Consequently, both variables are measured by looking at which value (0 or 1) they take. For practical reasons, dummy variables for *Receiver* (*Charity* and *Me*) and *Frame* (*Gains* and *Loss*) have been created to be used further in the analysis. The two independent variables above constitute four different treatment combinations, and we use interaction effects to create the effect of the cells of the experiment (see Figure 3 in section 5.3). The interaction effect is explained as the simultaneous effect of two or more independent variables on one dependent variable (Pallant, 2013, p. 279). From the descriptive analysis we discovered that one treatment sticks out from the others, namely *Me*Loss*. Thus, we create the interaction term *Me*Loss*, where *Charity*Gains* serves as the base group.

Additionally, the self-construal scale has been accounted for by conducting a small survey with 11 statements at the end of the experiment (see Appendix 1.8). We have used the Relational-Interdependent Self-Construal (RISC) scale developed by Cross, Bacon and Morris (2000) to measure whether participants are individualists or collectivists. A seven-point Likert scale have been used for the measurement, where 1 = strongly disagree and 7 = strongly agree. As the questions are to be combined to one single index, two of the questions must be reversed since they are negatively/individualistically loaded, and all the others are positively/collectivistically loaded. These are the statements that need to be reversed: “All in all, my close relationships have very little impact on how I feel” and “my relationships are not important for my own perception of what kind of person I am”. Prior to creating the index for self-construal, it is important to check the Cronbach’s alpha, which measures how well a set of variables can measure a single, unidimensional latent construct (Churchill, 2015, p. 455). If Cronbach’s alpha is greater than 0.8, the fit is considered to be very good, however it is still acceptable between 0.6 and 0.8. In this case, Cronbach’s alpha shows a value of 0.822, which indicates high compatibility. Thus, the variable *RISC* can be created by summing all the statements. It was also necessary to check that the participants in each group had similar average score, and by conducting an ANOVA test we found that the self-construal level is not significantly different across the groups (p-value= 0,836), which is what we expect from a random assignment. Moreover, there appears to be a borderline normal distribution of the answers to the statements. However, by looking at the means of the answers related to self-construal level (see Appendix 3), it is evident that the majority appears to be at a high level of *RISC*, which indicates a tendency towards a more collectivistic mind-set.

Other control variables

Furthermore, some dummy variables are to be added when testing the main independent variables. By generating dummy variables, the rating index is converted into binary variables. These provide a numerical representation of characteristics that are not fundamentally qualitative (Churchill, 2015, p. 429). In our case, most control variables are created from the demographics questionnaire at the end of the experiment: gender, age, faculty and level of study. The demographics variables are categorized as follows:

- Gender is coded into an indicator for female and male, where female is 1 and male is 0.
- Age is a continuous variable ranging from 19-53 years old from our sample.

- Faculty is coded into six different dummies, whereby each dummy represents one of the six faculties at the University of Stavanger.
- Study level is a continuous variable ranging from 1-4.

6.3 Test of Normality

In order to choose which tests will be appropriate for the data, a test of normality will be conducted. The term “Normal” is used to describe a bell-shaped, symmetrical curve, which has most of its scores in the middle of the distribution, and smaller amounts of scores towards the end (Pallant, 2013, p. 61). By conducting a test of normality using SPSS, several aspects can be investigated to conclude on the distribution of the data. For this test, one of the dependent variables we use is the continuous variable *CheatContinuous*, which measures the magnitude of the cheating for each participant. Firstly, the mean value is 1,17, and the 5% trimmed mean is 0,87. By comparing these numbers, one can check the impact of the extreme scores on the mean (Pallant, 2013, p. 65). In our case, the extreme scores do seem to have some impact on the mean, however not extensively. Moreover, the skewness and kurtosis values are 2,309 and 5,887, respectively. Skewness and Kurtosis values above or below 0 indicates a distribution that is not perfectly normal. Additionally, both values are positive which indicates that the scores are clustered to the left in low values, and that the distribution is rather peaked (Pallant, 2013, p. 66). These findings are also consistent with the histogram of the data (see Appendix 6). Furthermore, the test of normality shows a significant result (p-value: 0,000), which indicates that the distribution is not normal. Based on the above information, we conclude that our data on *CheatContinuous* is not normally distributed. Therefore, non-parametric tests will be used in the more detailed analysis.

6.4 Statistical tools

The findings from the descriptive statistics show only the marginal differences in cheating between the four conditions. Further statistical techniques to compare groups in more detail will be used. This will be completed with help from Mann-Whitney U tests, Chi-square tests and logistic regression analysis.

6.4.1 CheatContinuous as dependent variable

In order to test for differences between two independent groups on a continuous measure, the non-parametric Mann-Whitney U test can be used. This test compares the medians of the two

groups, thus the Mann-Whitney U test converts the score of each group into ranks, and evaluates if they rank differently (Pallant, 2013, p. 235). In this case, we use *CheatContinuous* as the continuous dependent variable to test for differences in level of dishonesty among the four different treatments.

Our results

The Mann-Whitney U test have been performed for combinations of all possible treatments, and the results are shown in Table 2 below.

Mann-Whitney z-Statistics (p-value)						
	(0) vs. (1)	(0) vs. (2)	(0) vs. (3)	(2) vs. (3)	(1) vs. (3)	(2) vs. (1)
Dishonesty (z-value)	-0,291	-0,053	-2,543	-2,431	-2,018	-1,452
Asymp. Sig. (2-tailed)	(-0,771)	(-0,958)	(0,011)**	(0,015)**	(0,044)**	-2,072
Notes: All Man-Whitney U tests are two-sided						

*** p < 0.01, **p< 0.05, * p< 0.1

(0) Charity and gain, (1) Charity and loss, (2) Me and gain, (3) Me and loss

Table 2 – Mann-Whitney U test

The results from the Mann-Whitney U tests shows six combinations for comparisons, whereby three are significant. By comparing level of cheating in the *Charity/Gain* treatment versus the *Me/Loss* treatment, a significant difference between the two groups can be detected (Z= -2,543, p= 0,011). These two groups are complete opposites in terms of framing and receiver, and there is significantly higher level of cheating in the *Me/Loss* (mean rank= 35,87) treatment compared to *Charity/Gains* (mean rank= 25,13).

Consequently, by comparing level of cheating in *Me/Loss* versus *Me/Gain* treatments, we investigate the effect of framing as the receiver treatment is the same (*Me*). The results show a significantly higher level of cheating (Z= -2,431, p= 0,015) in the *Me/Loss* group (mean rank=35,63) compared to the *Me/Gain* group (mean rank= 25,37). Thus, the two groups have the same receiver condition, however rank significantly different when there is a *Loss* framing rather than *Gain*.

Lastly, the level of cheating is significantly different when comparing the treatment groups *Charity/Loss* versus *Me/Loss* ($Z=-2,018$, $p= 0,044$). Here, we investigate the effect of receiver treatment (*Charity* versus *Me*), whilst the framing is the same in both groups (*Loss*). The results indicate that the level of cheating is significantly higher in the *Me/Loss* group (mean rank= 35,87) compared to *Charity/Loss* (mean rank= 25,13). Hence, the two groups have the same framing condition, however rank significantly different when the receiver is *Me* as opposed to *Charity*.

From these tests, there is a clear tendency towards the *Me/Loss* treatment group being significantly different from all others. Thus, where this treatment is not in the comparison mix, significant results are not obtained. Notably, it appears to be the combination of *Me* and *Loss* that is essential, as the *Me* or *Loss* conditions alone (paired with other conditions) does not appear to have a significant effect on level of cheating, compared to the other groups. By running logistic regression, it is possible to test whether the combination of *Me/Loss* significantly affects the probability of cheating, and this will be done in section 6.4.2.

6.4.2 Cheat as dependent variable

Chi-square test for independence

In order to explore the relationship between the categorical variables of interest, a Chi-square test will be performed. This test compares two variables in a contingency table and it determines if there is any significant difference between the expected frequencies and observed frequencies in each of the categories (Pallant, 2013, p. 225).

The two variables, *Receiver* and *Frame*, are analysed against the dichotomous variable *Cheat*. First, we check whether the output shows a violation of one of the assumptions of chi-square concerning the ‘minimum expected cell frequency’, which require all expected cell count to be 5 or greater. The note in this case indicates that 0 cells (.0%) have expected count less than 5, which means that the assumption is not violated, as all expected cell sizes are greater than 5, in our case greater than 25,50 (see footnote below Table 3 and 4).

In the first test the independent variable *Receiver* (*Me/Charity*) is used. Chi-square estimation results are reported in Table 3. 31 (60,80%) of the subjects in the *Me* treatment chooses to cheat, while in the *Charity* treatment 20 (39,20%) chooses to cheat. Hence, the statistical significance

of this difference will be further tested. The output shows that a Chi-square test for independence indicates a significant association between cheat and receiver, $\chi^2, (1, n = 120) = 4,126, p = 0,042, \phi = -0,185$. Thus, there is sufficient evidence at the $\alpha = 0.05$ level to conclude that the variables are not independent of each other and that there is a statistical relationship between categorical variables. This tells us that the respondents classified in the *Me* and the *Charity* treatments does not equally prefer to cheat.

Cheat * Receiver Crosstabulation

Cheat			Receiver		Total
			Me	Charity	
No cheat	Count		29	40	69
	% within Cheat		42,00 %	58,00 %	100,00 %
Cheat	Count		31	20	51
	% within Cheat		60,80 %	39,20 %	100,00 %
Total	Count		60	60	120
	% of Total		50,00 %	50,00 %	100,00 %

0 cells (.0%) have expected count less than 5. The minimum expected count is 25,5.

Pearson chi2 = 4,126

Pr = 0,042

*Table 3 – Cheat*Receiver crosstab*

In the second test the variable Receiver is replaced by the independent variable *Frame (Loss/Gain)*. As shown in Table 4, the effect is identical to the table above. The reason for these similarities was detected through the descriptive summary analysis. It was observed that people's cheating behaviour is exactly the same in the different conditions, unless *Me* and *Loss* is combined. *Me/Loss* treatment stands out and deviates from the cheating outcome of the three other treatments. The result in Table 4 indicates that the variables *Cheat* and *Frame* are not independent and that there is a relationship of some nature. There are differences in cheating behaviour in the two conditions, whereby it is apparent that those who got the *Loss* treatment (60,80 %) are more likely to cheat compared to those who got the *Gain* treatment (39,20 %). Thus, the frequency distribution of the *Frame* variable is not the same for all levels.

Cheat * Receiver Crosstabulation

Cheat			Frame		Total
			Loss	Gain	
No cheat	Count		29	40	69
	% within Cheat		42,00 %	58,00 %	100,00 %
Cheat	Count		31	20	51
	% within Cheat		60,80 %	39,20 %	100,00 %
Total	Count		60	60	120
	% of Total		50,00 %	50,00 %	100,00 %

0 cells (.0%) have expected count less than 5. The minimum expected count is 25,5.

Pearson chi2 = 4,126

Pr = 0,042

Table 4 – Cheat*Frame crosstab

MedCalc's online statistical calculator

Using SPSS for Chi-square tests restricts our analysis to only test each independent variable separately. To dig deeper into the analysis of Chi-square tests, we utilize a statistical online calculator called MedCalc. This calculator allows us to compare the proportions of each treatment by cross combining the independent variables. Interesting findings from these analyses is that the framing of *Gains* and *Losses* has no effect on the extent to which respondents' cheat when money is donated to charity (see attached output Appendix 4). 1/3 of respondents are willing to cheat when the money will be donated to charity, independently of framing, which is also easily observed in Figure 10 below.

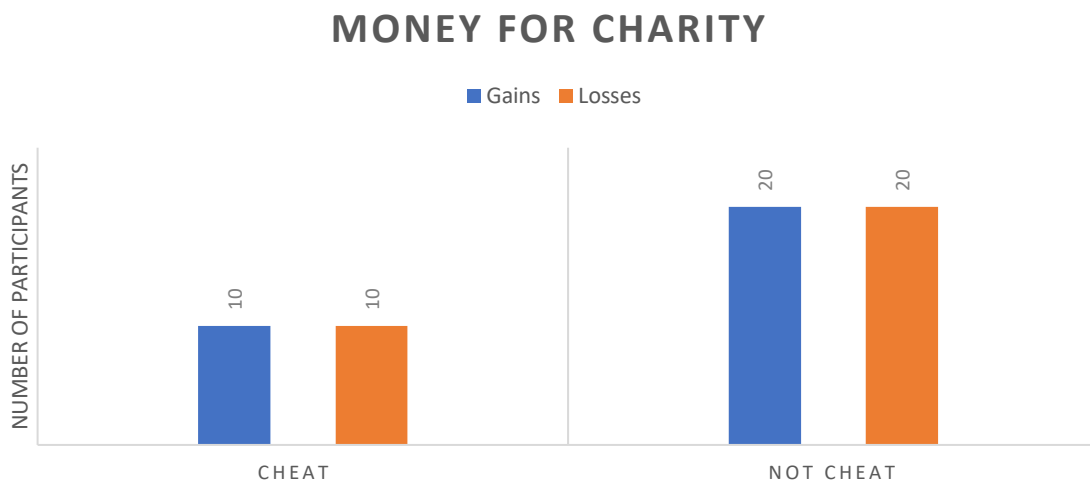


Figure 10 – Effect of framing on cheating behaviour when recipient is Charity

However, when there is a personal monetary gain, the framing of gains and losses has a significant effect on the likelihood to cheat, as illustrated in Figure 11 below. Framing in terms of losses increases the likelihood of cheating when the potential gain is personal. The MedCalc output shows that a Chi-square test for independence indicates a significant association between the variables, $\chi^2 = 4,126$, $p = 0,0045$ (see attached output Appendix 4). We conclude that there is a statistical relationship between the variables, indicating that the participants cheat differently in the two conditions. Specifically, the majority of the cheating appeared in the *Loss* condition, a total of 21 out of 30.

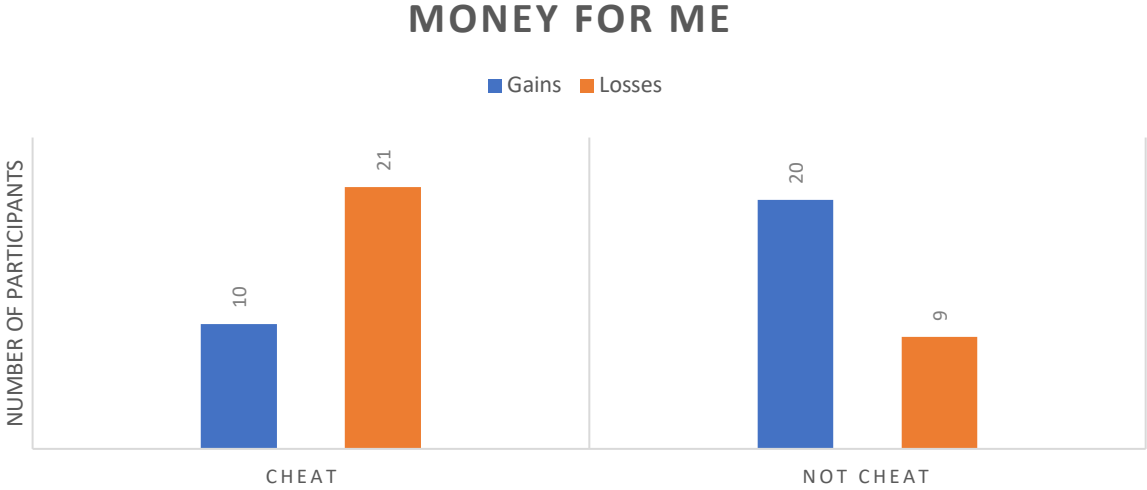


Figure 11 – Effect of framing on cheating behaviour when recipient is Me

Logistic regression

Logistic regression allows us to test models that predict categorical outcomes with two or more categories (Pallant, 2013, p. 175). It is used to estimate the probability of a binary dependent variable based on independent variables. The two possible dependent variable values in our case represent outcomes such as cheat/no cheat. The set of predictors includes the different treatments, where *Me* and *Loss* are the main independent variables. Further, interaction terms and other control variables such as demographics and the Relational-Interdependent Self-Construal (*RISC*) scale will be added. The first estimated model will have the form of equation (1) below and this will be considered as the base specification:

$$Pr(Cheat) = \beta_0 + \beta_1 Me + \beta_2 Loss + \varepsilon \quad (1)$$

In this model β_0 refers to the intercept, the coefficient β for each variable represents the effect each of them has on cheating and ε is the error term. $Me = 1$ if the participant got the charity treatment (i.e. was in the *Charity/Gain* or *Charity/Loss* treatment), whilst $Loss = 1$ if the participant got the *Gain* treatment (i.e. was in the *Gain/Charity* or *Gain/Me* treatment).

Regression estimation results are reported in Table 5. The top number for each variable is the odds ratio (OR) value and the bottom number in parenthesis shows the standard error. Model 1 represents the empirical results of the two different treatments. *Charity* and *Gain* treatments are the base groups and therefore remain omitted categories. As shown in Table 5 Model 1, the odds ratio value for *Me* is positive at 2,200 and makes a statistical significant contribution to the model at 5% significance level. This means that that β_1 is statistically significantly different from zero. The positive estimated coefficient implies that being in the *Me* treatment results in an increased probability of recording a score of 1 in the dependent variable (which in this case indicates the presence of cheating). As the *Charity* treatment is the counter point of the *Me* treatment, it means that the *Charity* coefficient will be negative and decrease the likelihood of cheating. The coefficient and p-value for the *Loss* treatment is exactly the same, except that the base group now is *Gain*. Hence, interpretation will be exactly the same as with the *Me* treatment.

In the second Column an interaction between the two treatments has been added. The results show that the two independent variables are no longer significant, while the interaction term is significant at the 5% significance level. This indicates that the influence of *Me* on probability of cheating depends on the *Loss* treatment. The positive coefficient of the interaction term means that when *Me* is combined with *Loss*, it has a positive effect on cheating. What is worth noticing here is that when a significant interaction effect is found, we cannot easily and safely interpret the main effects. This is because, in order to describe the impact of one of the independent variables, we need to specify the level of the other independent variable. Consequently, there is no main effect because the significant results from Model 1 is an effect of the two treatments interacting each other, which Model 2 shows. It is the combination of *Me* and *Loss* that turns out to affect how people behave. This is easily displayed in Figure 9 in section 6.1.2 where it was found the outcome of cheating behaviour was identical in the

Charity/Gain, *Charity/Loss* and *Me/Gain* treatments. Conclusively, it is through the people in the *Me/Loss* treatment we find a significant effect.

In Model 3 demographical variables are added to supplement the findings and see if they have any significant effect on cheating. The result regarding the two independent variables and the interaction term is the same, which was expected. Whenever the interaction term is added, the two predictors will turn out to have an insignificant effect as the key effect is caused by the interaction term. Being a female affects the probability of cheating positively and is highly significant at 1 % significance level, as 0,01 is the most conservative significance level. The odds ratio of a student choosing to cheat is 4,068 times higher for female students than for men, all other factors being equal. The other control variables, age and study level, are not significant, but have positive odds ratios which indicates that there is a positive relationship between an increase in age and higher study level and probability of cheating.

Further, we want to test whether there is any evidence that higher degree of collectivism among participants increases the probability of cheating if they are in the *Charity* condition.

For this purpose, an interaction term has been added in Column 4 of Table 5. Since the *Me* condition is included in the logistic regression due to previous results, an interaction term with *Me* and Relational-Interdependent Self-Construal (*RISC*) scale is computed. This new variable allows us to test how the degree of individualism vs. collectivism influences the likelihood of cheating among students in the *Me* treatment. However, because the hypothesis wants to test if higher levels on the *RISC* scale increases cheating in the *Charity* condition, it indicates that a negative sign on the interaction term is expected, as *Me* variable is the counter point of *Charity*. As mentioned in the methodology, the data from the *RISC* scale was collected through a questionnaire of 11 statements, where a 7-point Likert-scale has been used to measure the statements (1=strongly disagree and 7=strongly agree). Basically, we are testing if higher degrees on the scale, which corresponds a higher level of collectivism, contribute to higher cheating. Model 4 shows that the significance of the interaction term is still present at the same significance level (5 %). The new interaction term appears not to have significant effect on cheating and does not have the expected sign, indicating that the variables *Charity* and *RISC* does not positively influence each other.

The last model includes all independent variables, interaction terms and demographic variables. The results show that it is the same two variables, the interaction term *Me*Loss* and the female

dummy, which recur to remain significant at the same significance level, 5 % and 1 % respectively. The results for the other variables do not show any change. Through the analysis there has been observed that the *Me*Loss* interaction term and the female variable are significant with all the other variables in different models, which indicates that they are solid and robust as they keep precisely the same significance level. These results reinforce the findings from the descriptive summary analysis.

Cheat

	Model 1	Model 2	Model 3	Model 4	Model 5
Me	2,200** (0,384)	1,000 (0,548)	1,204 (0,587)	0,170 (1,974)	0,494 (2,070)
Loss	2,200** (0,384)	1,000 (0,548)	0,668 (0,594)	1,000 (0,548)	0,676 (0,594)
Me*Loss		4,667** (0,78)	8,059** (0,847)	4,717** (0,784)	1,527** (0,848)
Female			4,068*** (0,466)		1,563*** (0,471)
Age			0,999 (0,044)		1,003 (0,045)
Study level			0,862 (0,344)		0,844 (0,347)
Me*RISC				1,406 (0,362)	1,186 (0,379)
Number of obs.	120	120	120	120	120
Pseudo R	[0,068, 0,091]	[0,098, 0,132]	[0,170, 0,229]	[0,105, 0,141]	[0,172, 0,231]
Chi-square	3,963	0,000	6,005	6,533	4,976

*p<.10, **p<.05, ***p<.01.

Table 5 – Logistic regression

7. Discussion of the results

This section will provide a discussion of the findings, both in relation to theory and existing literature, which will be used to conclude the hypotheses. Additionally, the implications of the findings, as well as limitations will also be presented.

7.1 Cheating in general

Hypothesis 1 – Participants will cheat, but not fully utilize their cheating potential.

From our sample, it is evident that a large fraction indeed does cheat as, a total of 51 (42,5%) of 120 participants. Compared to other experiments on dishonesty, the number of cheaters vary with different treatments that have been given, however Gino et al. (2011) finds roughly between 13,7% and 41,7% cheaters across several experiments. Moreover, Gneezy (2016) also finds a percentage of cheaters of 34,26% in their observed condition, but a much lower percentage (9,68% and 1,37%) in different treatments in the same experiment. Thus, our experiment has a relatively large number of cheaters, and our hypothesis that people do cheat when presented the opportunity do to so without getting caught is supported.

Another aspect of dishonesty is whether people are cheating hard, or hardly cheating. Among the participants who cheated in our experiment, 80% cheated by adding between 1-3 extra “correctly” solved matrices when reporting their answer. It is also worth mentioning that most people who did cheat managed to solve 0-5 matrices in reality. Hence, the majority of our participants do not cheat to the maximum extent, and our hypothesis on magnitude is supported. This finding is in line with Mazar et al.’s (2008) findings, where they found that people only cheated 6,7% of the possible magnitude. Moreover, Ariely’s (2012, p. 18) “fudge factor” theory may come into play as well, which suggests that people may not have lied to the maximum extent due to their self-concept and wanting to feel good about themselves and avoid negative internal rewards. Thus, our results are in contrast to Kajackaite and Gneezy (2015) and Gneezy et. al (2017) that finds that if people lie, they lie maximally – and 68% of their liars did. From our sample, 8 people (15,7%) lied to some extent to achieve the maximum payoff of 100 NOK, however it must be noted that only 5 of those participants had to lie by more than 3 matrices to achieve it.

Another important aspect of these findings is the anchoring effect, which is the cognitive bias that people tend to rely too much on the first piece of information they receive when making decisions (Tversky & Kahneman, 1974). It must be noted that the magnitude of the cheating is only interesting when looked upon in a relative matter. Thus, the percentage (15,7%) of people who cheated to some extent to achieve the maximum payoff of 100 NOK becomes less relevant, as the people who cheated by a relatively large amount (added 5 or more matrices) is lesser (9%). In our experiment, only 10 matrix tasks were included, which automatically creates an “anchor” of how many matrices that would be possible to solve, and probably an opinion of how many the other participants would be able to solve. This could also be a plausible explanation as to why the participants did not choose to cheat maximally, as they perhaps thought that solving all 10 matrices (if they did not manage it themselves) would be unlikely and suspicion from the experimenters might arise.

Conclusively, our results indicate that people do cheat, but only marginally. Considering the cash rewards for each matrix (+10/-10 NOK), the 80% of people who only cheated by 1-3 matrices increased their payoff with a maximum of 30 NOK – a rather insignificant amount for most. Thus, the question arises; why would people turn themselves into “criminals” for pennies? What is the motivation behind conducting immoral acts for marginal rewards? Two preliminary explanations are seen as probable. Firstly, the theory of self-concept maintenance (Mazar et al., 2008) as explained in the theory and literature review section, with regards to people not wanting to cheat by large amounts because they want to preserve a good self-image and comply with social norms and values. The other explanation may be related to self-concept as well, however with a different focus; people may want to report a higher number due to wanting to maintain status. This means that participants may not want to appear “dumb” and want to be able to tell their friends how many matrices they solved after the experiment with pride, or at least want to perform averagely. Due to the anchoring effect, the “expected” score may be somewhere around 5, and our participants in reality solved an average of 4,6 matrices (with a median of 4 matrices), which corresponds with cheating by 1-3 matrices.

7.2 Receiver – Me versus Charity

Hypothesis 2 – The majority of the cheating participants will appear in the Charity treatment, compared to the Me treatment.

In this experiment, two factors were added: receiver and frame, and the following section discusses the impact of manipulating the receiver of the monetary gains on cheating behaviour. The chi-square test shows significant results for cheating in relation to *Me* and *Charity*, which indicates that the participants cheat differently in the two conditions. Specifically, the majority of the cheating (60,80%) appeared in the *Me* condition. Thus, our hypothesis that more people would cheat for *Charity*, compared to for personal gain, is rejected.

The results that people cheat more for themselves can be explained by Feinberg's (2013) theory on psychological egoism, saying that we are only able to pursue our own self-interest. In this case, it seems that the self-interest in monetary gains trumps the self-interest in behaving purely moral for the majority. Thus, the sense of egoism stands strong in our experiment, and a "Robin Hood" effect does not seem to be present. Nevertheless, 39,2% of the cheaters were in the charity treatment, indicating that egoism does not necessarily stand alone. Batson's (2011) explanation to this would be that those who cheated for charity did so for the sole purpose of helping someone else. On the other hand, Andreoni (1990) would propose that the reason for the cheating may be a combination of genuine concern and desiring a "warm-glow" for themselves. In the charity treatment, the value of honesty being violated is somewhat "nulled out" by being dishonest for a good cause, making the cheater a hero for going against one's own principles for others benefit. Though, if this is the case, why would people cheat more for themselves than for a charitable cause, if self-concept is so prominent? A reasonable explanation could be that the participants were not as willing to risk getting caught for someone else's benefit, as some uncertainty revolving the shredders may have been present.

The finding that people cheat more for themselves is in contrast to the results of Gino et al. (2013), where they find that individuals do cheat more when the cheating can benefit others. Notably, the ones who cheated the most were those who also had potential personal gain from the cheating. This may indicate that warm-glow is not sufficient against personal gains. However, in our experiment the potential personal gain was very small, which complicates the previous statement. Another aspect of this is the rationality of cheating for such small amounts for oneself. Consider, is it more rational to cheat for an extra 30 NOK for yourself, or to cheat

by the same amount for charity? At least in the *Charity* condition, it will not be your amount alone that matters, it is the combined donations from all the other participants. If all 60 participants in the *Charity* treatment cheated by 1-3 matrices (which 80% did, and still allows for a positive self-image), the total sum for money donated would increase substantially. This may be argued to be more rational than to cheat and go against your morals for 10-30 NOK for yourself. In this sense, one could think of cheating for yourself as using your System 1, as it perhaps is an instinctive action, and cheating for charity through using System 2, which is a more deliberate choice (Kahneman, 2003). Nonetheless, to get a clear answer further research must be conducted.

7.3 Frame – Gain versus Loss

Hypothesis 3 – The majority of the cheating participants will appear in the Loss treatment, compared to the Gain treatment.

By running the Chi-square test for cheating and framing we find that the sample provide evidence of an association between cheating and framing. This indicates that the two variables are not independent and that there is a relationship between them. Participants cheat differently in the two conditions and it was apparent that those who got the *Loss* treatment (60,80 %) are more likely to cheat contrary to those who got the *Gain* treatment (39,20 %). Thus, the hypothesis that more people would cheat in the *Loss* treatment compared to the *Gain* treatment is supported.

How can these dissimilarities in choices amongst participants be explained? According to prospect theory where loss aversion and endowment effect are central concepts, this seemingly unclear conclusion results from how the information is framed and what it highlights. One fundamental fact about human beings is that we hate to lose more than we like to win (Kahneman & Tversky, 1979). A loss is felt twice as severely as gain is experienced; therefore we try to escape from a loss more than we try pursuing the same gain. This corresponds with the theory of endowment effect, which states that individuals ascribe more value to an object once ownership has been acquired (Kahneman, Knetsch & Thaler, 1991). According to Kahneman and Tversky (1981) people tend to seek risk when a negative frame is presented and avoid risks in positively frames. This is evident in our thesis where different representations of the same situation, yield an outcome where people significantly cheat more whenever the *Loss*

condition is present. Participants are willing to take risks by cheating to avoid minor losses in form of pennies. The tendency to overweight losses is related to cognitive biases and is the reason to why different representations of the same situation yield different human decisions. This way loss aversion and endowment effect can sometimes lead to irrational decision-making, as people's irrational fear of loss messes with their decisions.

7.4 Relational-Interdependent Self-Construal scale

Hypothesis 4 – Higher degree of collectivism among participants increases the probability of cheating if they are in the Charity condition

In regards to the *RISC* scale, we hypothesized that higher degree of collectivism increases the probability of cheating if the person is in the *Charity* condition. There was not sufficient evidence to support our hypothesis and the result is therefore counterintuitive. However, even though the interaction term *Me*RISC* did not prove to be significant, it does not mean that it is unrelated to probability of cheating. A possible reason for insignificant result can be because as shown in Appendix 3, people are quite similar in this attitude, where the majority is at high levels (collectivistic). Low variation in the data makes it difficult to distinguish people in this sense and therefore hard to tease out any effect. Additionally, the fact that we have a fairly small sample, as discussed above, can contribute to decrease the statistical power of detecting any effect when there is one to be detected. Interpretation of such Likert scales can also be somewhat ambiguous (Churchill, 2015, p. 224). It is not possible to be totally certain that the recorded score does equal the respondents' true opinion, which in turn can create measurement error during data analysis.

7.5 Treatments

The 2 by 2 experiment has 4 different treatments, as described in Figure 3 in section 5.3; *Charity/Loss*, *Charity/Gain*, *Me/Loss* and *Me/Gain*. 30 students were randomly assigned in each treatment, and the aim was to check for any differences in dishonest behaviour across these groups. From the descriptive statistics, it was evident that the *Me/Loss* treatment stood out, with 21 cheaters, as opposed to 10 in each in the others. Additionally, when using *CheatContinuous* as dependent variable, Mann-Whitney tests revealed that the *Me/Loss* treatment ranked differently than all other groups with a higher mean rank, meaning a higher level of cheating. Thus, by using both *Cheat* and *CheatContinuous* as dependent variables, the

results remained the same, which is why we chose to focus on this treatment further in the analysis. The MedCalc's online statistical calculator reveals that the framing of gains and losses has a significant effect on the likelihood to cheat only when there is a personal gain. Lastly, by running the logistic regression with *Cheat* as a dependent variable, we find that when *Me* is combined with *Loss* in an interaction term, it has a positive and significant effect on cheating.

The effect of the money is stronger in the loss domain where students themselves are the receivers of the monetary gains, as opposed to when money is donated to charity. When there is a private earning that benefits the students, the framing of losses has a significant effect on the probability to cheat, and that is when the pain with the losses kicks in. Students are willing to take risks and cheat even if it is only a matter of pennies, because they are sensitive to minor individual losses and dislike to lose something they could have for themselves. Hence, it appears that loss aversion does not have an effect on the decision-making process when the losses affect others than oneself. In this case, two irrational factors are enforcing each other, which could be one of the reasons as to why this treatment has such a strong effect on cheating behaviour.

7.6 Limitations

“There is no such thing as a “perfect” study, every research has its limitations. These limitations can bias the results” (Churchill, 2015, p. 516). First and foremost, experiment as a research design has its limitations. As mentioned earlier in this thesis, we gained a sample size of 120 respondents. This is a sufficient sample considering that this is a school project with limited time and resources, but compared to the number of students at University of Stavanger, 12 000 in total (Universitetet i Stavanger, 2018), our results can be mistaken because the population size is large compared to the sample size. The disadvantage with a small sample size is that it reduces the power of the study and increases the likelihood of a Type II error, which indicates failing to reject a false null hypothesis (Deziel, 2018). Hence, the lack of statistical significant results does not mean that there is no effect, but due to the small sample size the result can sometimes miss statistical significance. There is also a possibility that participants misunderstood the content, as some did not realize that the risk of being caught if they cheated was eliminated until they had handed over the sheets. This can be a possible reason for a lower cheating rate, than what would have been the case if everyone initially understood that it was a risk free “cheating environment”. In addition, the fact that this study is conducted with only

students as participants, it makes us doubt about the practical application and representativeness of the results in a more general setting. Moreover, the experimental design has a “ceiling effect” for the clever students who managed to solve the majority of the matrix tasks. This means that possibility to cheat for those who for instance managed to solve 8 matrices was lesser. It could be that those people were just as interested in cheating, but that effect was not included due to the ceiling (maximum 10 matrices). However, as described in the descriptive analysis, of those who managed to solve a maximum of 5 matrices in reality, 80% cheated by adding just 1-3 matrices. This suggests that the main tendency is cheating by few matrices regardless, however future research should be conducted with several matrices to investigate this topic without the “ceiling effect”. In overall, these limitations may affect the results.

7.7 Implications

Despite the limitations, there are some noteworthy findings that could have important implications for businesses, organizations and individuals. From our findings, people will behave dishonestly if the opportunity presents itself to do so risk-free. For businesses and organizations, this arises a debate of whether trust-based relationships or contracts are most efficient. While enforcing contracts and monitoring may be costly, a large number of small lies will ultimately add up as a huge cost for society and businesses. Our results support the notion of opportunism, which is defined as “self-seeking interest with guile” (Williamson, 1975, p. 6), where guile is explained as, among other things, lying, cheating and stealing. Thus, Williamson (1993) argues that one should not contract in a naïve way, one should attempt to mitigate opportunism in a cost-effective manner. Nevertheless, our findings indicate that people will only lie to a certain extent, and also the research of Gneezy et al. (2016) suggests that if the stakes of the lying is high enough, people do not lie. Considering the dishonest behaviour discovered, and that complete contracts and monitoring is expensive, it may not be efficient to solely rely on this. The idea of self-concept, irrationality and personal values and norms also stands strong for individuals’ decision-making, which implies that these factors should be considered and taken advantage of. However, the element of the shredder condition in this experiment shows that monitoring should not be disregarded, henceforth moderate contracts and monitoring may be a necessity.

Regarding cheating for charity, our findings show that 39,2% of the cheaters chose to cheat for “Barnekreftforeningen”. This indicates that individuals are willing to go out of their way to help

and rebel against the social norms of society, as well as one's own value of honesty. This can be considered good news for charitable organizations. Since this experiment shows that people value self-interest and cheats more for themselves, this may indicate that a personal gain in exchange for donating can promote charitable donations. Moreover, this thesis finds results that strengthens the concept of loss aversion, and shows that when personal stakes are involved, it hurts more to lose than the pleasure of gaining. The implication of this could be that businesses should frame their messages as a potential loss for the audience, by showing them what they lose instead of what they gain by using their product. Surely, this phenomenon can also be used in personal settings.

8. Conclusion

To sum up, investigating both the number of cheaters and the magnitude of the cheating provides us with some interesting findings. Results show that a substantial portion in fact does cheat (42,5%), and that 80% of those who chose to cheat, cheated by adding 1-3 matrices to their answer. This indicates that people do not exclusively cheat to maximize the potential payoff, but that there may be some moral aspects tied to self-concept that limits cheating. Moreover, by manipulating the recipient of the monetary rewards, the results show a significant higher number of cheating participants for selfish gain, rather than for the charity "Barnekreftforeningen". This proposes a higher propensity act immorally for one's own benefit, compared to someone else's. Another aspect regarded the message framing, and the findings show a higher tendency to cheat when presented with a potential loss, rather than a potential gain. This finding corresponds with the theory of loss aversion and endowment effect, and indicates that people are more willing to cheat if they feel they lose something from not doing so. Henceforth, our 2 by 2 design revealed that one treatment encouraged cheating significantly more than the others – namely *Me/Loss*, where the participants were presented with a possible personal loss if not cheating. This indicates that loss aversion exclusively has an effect when the earnings are directed for oneself, not anyone else. Additionally, the self-construal theory was added to investigate whether degree of individualism versus collectivism affects cheating behaviour. In this experiment, no significant results on this was obtained, which may be due to lack of variance in the sample.

This study offers sufficient findings as point of departure for future research and contributes with a new point of view on the topic of dishonesty. However, some limitations must be

underlined. The sample size is adequate for this purpose considering our time and resources, but stronger and new significant effects could occur with a larger sample. Additionally, the experimental design creates a “ceiling effect”, whereby the participants who managed more than 5 matrices in the given time domain did not get the potential to cheat by larger amounts. This means that some clever but potential great cheats were not captured in the data. Thus, dishonesty is a complex issue which demands more exploration in the future. For further research we find that the most unclear answers are related to manipulating the recipient of the earnings - specifically cheating on behalf of others. An interesting angle would be to add a reminder of morality to test whether that reminder would decrease cheating (as it is not moral), or increase cheating, as cheating for charity may be seen as a good deed regardless of ethics. This would also consider the possibility of “turning on” a specific self-image suited for a desired behaviour.

The findings of this thesis both agrees and disagrees with much of the existing base of literature. In our experiment, dishonesty and cheating behaviour appears to be affected by a mix of self-concept evaluation, loss aversion and perhaps a little spontaneity. It also indicates that the majority will not risk being caught for their immorality if the benefit is directed towards someone else. Thus, the sense of egoism and self-interest appears to be stronger than altruism, and good deeds are forgotten in the haze of the moment. In this case it is not possible to conclude that the goal justifies the means, and the majority seems to cheat with their heads, rather than their hearts.

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10. Appendices

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 - 1.2 Intro *Charity/Gain*
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 - 1.4 Intro *Me/Gain*
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- Appendix 6: Test of Normality - histogram

- Appendix 7: Receipt for the donation for "Barnekreftforeningen"

Appendix 1

Appendix 1.1

Velkommen til eksperiment ved Universitetet i Stavanger!

Du har nå mulighet til å tjene opptil 100 kroner til inntekt for Barnekreftforeningen.



På neste ark finner du oppgavene som skal løses. Det er 10 forskjellige matriseoppgaver, hvorav du skal løse så mange du klarer på 5 minutter. I hver matrise skal man finne fram til to tall som til sammen blir 10. Marker en ring rundt de to tallene du velger.

Her er et eksempel på en løst oppgave:

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	9.86
5.21	3.94	7.18

$$\begin{array}{r} 4.16 \\ + 5.84 \\ \hline = 10 \end{array}$$

Du starter med 100 kroner i utgangspunktet, og for hver ubesvart matriseoppgave trekkes 10 kroner fra dette beløpet. Beløpet du står igjen med til slutt donerer vi til Barnekreftforeningen.

Når du får beskjed, snu arket og løs så mange oppgaver du klarer. Lykke til!

Appendix 1.2

Velkommen til eksperiment ved Universitetet i Stavanger!

Du har nå mulighet til å tjene opptil 100 kroner til inntekt for Barnekreftforeningen.



På neste ark finner du oppgavene som skal løses. Det er 10 forskjellige matriseoppgaver, hvorav du skal løse så mange du klarer på 5 minutter. I hver matrise skal man finne fram til to tall som til sammen blir 10. Marker en ring rundt de to tallene du velger.

Her er et eksempel på en løst oppgave:

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	9.86
5.21	3.94	7.18

$$\begin{array}{r} 4.16 \\ + 5.84 \\ \hline = 10 \end{array}$$

For hver oppgave du besvarer donerer vi 10 kroner til Barnekreftforeningen. Maksimalt beløp er 100 kroner.

Når du får beskjed, snu arket og løs så mange oppgaver du klarer. Lykke til!

Appendix 1.3

Velkommen til eksperiment ved Universitetet i Stavanger!

Du har nå mulighet til å tjene opptil 100 kroner som blir utbetalt kontant når eksperimentet er ferdig.

På neste ark finner du oppgavene som skal løses. Det er 10 forskjellige matriseoppgaver, hvorav du skal løse så mange du klarer på 5 minutter. I hver matrise skal man finne fram til to tall som til sammen blir 10. Marker en ring rundt de to tallene du velger.

Her er et eksempel på en løst oppgave:

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	9.86
5.21	3.94	7.18

4.16
+ 5.84
<u>= 10</u>

Du starter med 100 kroner som utgangspunkt for utbetaling, og for hver ubesvart matriseoppgave trekkes 10 kroner fra dette beløpet.

Når du får beskjed, snu arket og løs så mange oppgaver du klarer.

Lykke til!

Appendix 1.4

Velkommen til eksperiment ved Universitetet i Stavanger!

Du har nå mulighet til å tjene opptil 100 kroner som blir utbetalt kontant når eksperimentet er ferdig.

På neste ark finner du oppgavene som skal løses. Det er 10 forskjellige matriseoppgaver, hvorav du skal løse så mange du klarer på 5 minutter. I hver matrise skal man finne fram til to tall som til sammen blir 10. Marker en ring rundt de to tallene du velger.

Her er et eksempel på en løst oppgave:

4.16	4.51	1.66
8.29	8.05	9.03
4.73	5.84	9.86
5.21	3.94	7.18

4.16
+ 5.84
= 10

For hver matriseoppgave du løser får du utbetalt 10 kroner. Det er 10 oppgaver på arket, så man kan maksimalt få utbetalt 100 kroner.

Når du får beskjed, snu arket og løs så mange oppgaver du klarer.

Lykke til!

Appendix 1.5

Oppgaveark

Sett ring rundt de to tallene som til sammen blir 10 i hver matrise.

1.69	1.82	2.91
4.67	2.81	3.15
5.82	5.06	4.28
6.36	7.19	4.57

1.17	4.83	7.76
5.66	1.86	5.17
6.83	5.95	4.25
7.01	6.28	3.82

0.49	0.74	1.13
3.72	2.66	1.22
3.75	5.22	5.67
8.87	8.23	7.71

0.47	4.61	2.57
3.17	3.82	4.38
4.94	5.39	5.98
2.15	4.86	7.54

2.92	4.98	4.34
1.39	0.72	5.53
8.61	3.57	3.36
6.8	0.53	7.58

0.81	1.31	2.09
4.55	3.75	3.12
5.62	9.41	6.88
7.02	8.48	8.51

0.17	3.46	2.44
6.02	2.46	2.63
6.05	6.21	6.61
8.22	8.19	7.54

4.74	4.78	0.83
1.61	5.97	4.09
5.96	3.29	9.09
0.87	9.13	2.71

6.21	2.47	9.57
2.68	9.52	4.52
8.72	7.69	1.47
6.41	4.44	7.32

3.08	9.42	5.87
3.94	5.41	3.42
4.02	5.06	4.12
4.13	4.65	2.86

Når du er ferdig skal dette arket makuleres, så det er viktig du husker hvor mange matriser du klarte å løse.

Appendix 1.6

Kvittering

Gang antall riktige svar du hadde på matriseoppgaven med 10 for å finne beløpet som skal bli donert til Barnekreftforeningen.

Opplysningene under vil kun brukes som dokumentasjon til regnskapsavdelingen ved UiS.

Jeg _____ har deltatt i forskningsprosjekt ved Universitetet i Stavanger og tjent _____ NOK som jeg herved ber UiS donere til Barnekreftforeningen.

Personnummer/Studentnummer:

Skattekommune (oppgis selv om beløpet ikke er skattepliktig):

Signatur

Dato

Appendix 1.7

Kvittering

Gang antall riktige svar du hadde på matriseoppgaven med 10 for å finne beløpet du skal ha utbetalt.

Opplysningene under vil kun brukes som dokumentasjon til regnskapsavdelingen ved UiS.

Jeg _____ bekrefter å ha mottatt _____ NOK fra
Universitetet i Stavanger for min deltakelse i eksperiment.

Personnummer/Studentnummer:

Skattekommune (oppgis selv om beløpet ikke er skattepliktig):

Signatur

Dato

Appendix 1.8

Angi i hvilken grad du identifiserer deg med påstandene under, hvor 1= veldig uenig og 7=veldig enig. Sett ring rundt svaret ditt.

Når jeg føler meg nær en person får det meg ofte til å føle at den personen er en viktig del av den jeg er.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Mine nære forhold er en viktig del av hvem jeg er.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Jeg blir stolt når noen som står meg nær har oppnådd noe viktig.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Jeg tror en av de viktigste sidene ved meg fanges opp ved å forstå hvem mine nære venner er.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Når jeg tenker på meg selv tenker jeg ofte på mine nære venner eller familie også.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Hvis noen sårer en person som står meg nær blir jeg såret selv også.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

På generelt grunnlag er mine nære forhold en viktig del av mitt selvbilde.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Samlet sett har mine nære forhold veldig lite å gjøre med hvordan jeg føler meg.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Mine relasjoner er ikke viktige for min oppfattelse av hva slags person jeg er.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Min følelse av stolthet kommer fra å vite hvem jeg har som nære venner.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

Når jeg går inn i et nært vennskap med noen utvikler jeg ofte en sterk følelse av identifikasjon med den personen.

1. Veldig uenig 2. Uenig 3. Litt uenig 4. Vet ikke 5. Litt enig 6. Enig 7. Veldig enig

SNU ARKET FOR Å FORTSETTE

Appendix 1.9

Fyll inn

Kjønn

- Kvinne
- Mann

Hva er din alder?

_____ år

Hvilket fakultet tilhører du?

- Handelshøyskolen ved UiS
- Helsevitenskapelige fakultet
- Teknisk-naturvitenskapelige fakultet
- Fakultet for utøvende kunstfag
- Det samfunnsvitenskapelige fakultet
- Fakultet for utdanningsvitenskap og humaniora

Hvilket nivå studerer du på nå?

- Årsstudium
- Bachelor
- Master
- Doktorgrad

Appendix 2

E-mail invitations for students

The following text applies only to Norwegian-speaking students.

Kjære student,

Masterstudenter ved Universitetet i Stavanger ønsker herved å invitere studenter til å delta på eksperiment.

Eksperimentet består av å løse noen enkle oppgaver innen en gitt tidsramme, og det er ingen krav til forkunnskaper. Oppgaven vil være på norsk, og hele eksperimentet tar ca. 15 minutter.

Om du er heldig kan du også tjene litt penger.

Datoer for gjennomkjøring av eksperimentet er:

Tirsdag 10.04.18	12:30, 13:00, 13:30, 14:00, 14:30	(Rom AR G-202)
Onsdag 11.04.18	12:30, 13:00, 13:30, 14:00, 14:30	(Rom AR V-208)
Torsdag 12.04.18	12:30, 13:00, 13:30, 14:00, 14:30	(Rom AR G-201)

Eksperimentet finner sted i Arne Rettedals Hus alle dager, henholdsvis i AR G-202 på tirsdag, AR V-208 på onsdag og i AR G-201 på torsdag.

Påmeldingsskjema finner du i linken under:

https://qtrial2018q1az1.az1.qualtrics.com/jfe/form/SV_5cYak2oYPA553BX

Merk at det er begrenset med plasser, og dersom man velger et tidspunkt som allerede er fullt åpner man linken på nytt og velger et nytt tidspunkt. *Man kan kun delta i eksperimentet en gang. Dersom man melder seg på flere ganger vil påmeldingen bli slettet slik at flere studenter får mulighet til å delta.*

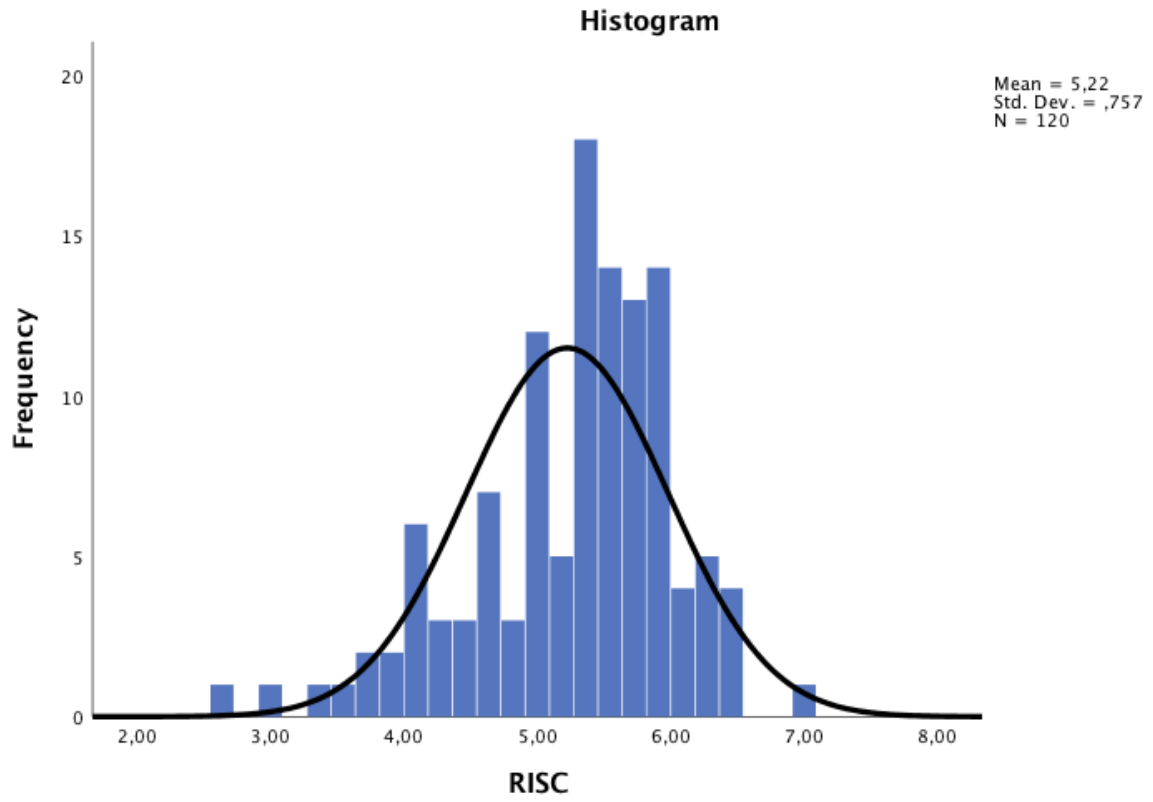
Dersom du har noen spørsmål, send en e-mail til ha.andreassen@stud.uis.no.

Vi håper å se deg der!

Mvh

Hanne Andreassen og Saranda Hoti
Forskerteamet

Appendix 3



Appendix 4

Results

Difference	0 %
95% CI	-22.7344 to 22.7344
Chi-squared	0.000
DF	1
Significance level	P = 1.0000

Results

Difference	37 %
95% CI	11.7104 to 56.3561
Chi-squared	8.084
DF	1
Significance level	P = 0.0045

Appendix 5

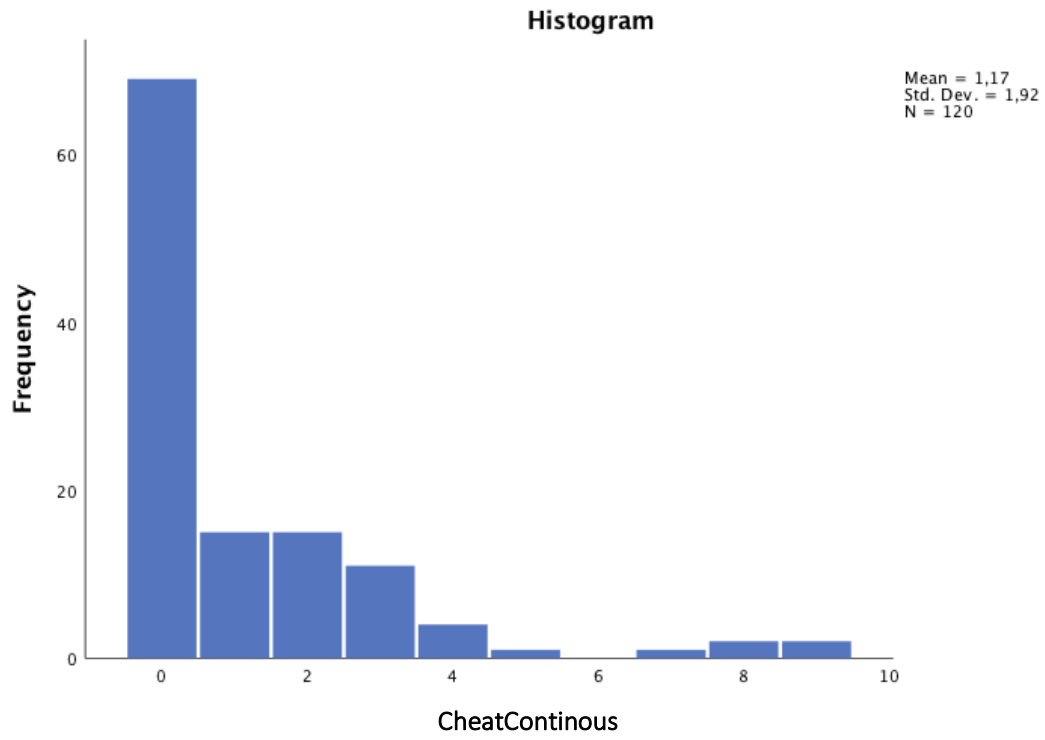
Cheat * Fakultet Crosstabulation

Count

		Fakultet						Total
		Handelshøgs kolen ved UiS	Helsevitensk apelig fakultet	TekNat	Kunstfag	Samfunnsvite nskapelig fakultet	Utdanningsvit enskap og humaniora	
Cheat	No cheat	27	1	10	1	10	20	69
	Cheat	25	0	11	0	8	7	51
Total		52	1	21	1	18	27	120

Appendix 6

CheatContinuous histogram



Appendix 7

