

It is not all about the money

–A study of social norms based on Adam Smith`s Theory of Moral Sentiments

by

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Preface

With this thesis I complete my Masters degree at the University of Bergen.

First and foremost, I would like to give a sincere thanks to my supervisor, Professor Sigve Tjøtta. His guidance, thoughts and our conversations have been inspiring and highly helpful. Thank you for always making me feel welcome and important. Secondly, I would like to thank PhD students at the University of Bergen, Nina Serdarevic and Eirik A. Strømmand for sharing their knowledge on experimental methods with me. Thanks to DIGSSCORE and Robert Rebnor at BI for facilitating the experiments and to Småforsk for financial support. Thanks to Sondre V. Michelsen, who I really enjoyed collaborating with on conducting the experiments, and to Fredrik Sortland who assisted.

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At last but not least, thank you to everyone who attended the experiments.

Oda Kristine Storstad Sund

Oda Kristine Storstad Sund, Bergen, June.01.2017

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Abstract

Social norms have many similarities with Adam Smith`s moral rules of conduct. Basing hypotheses regarding social norms on Smith`s theories on moral behavior, this thesis aims to study whether social norms help explain social behavior.

To study social norms, the norm elicitation method of Erin Krupka and Roberto Weber (2013) is applied, both with a within- and between-subject design. The hypothetical situations concern distributional choices, of which “Person A” is granted full allocations rights of a pool of money owned together with another randomly selected “Person B”. Incentivized to match the modal answer, participants are to evaluate each actions available to “Person A” on a four-point scale. The elicited norms are also used to make predictions of actual behavior. Behavior is studied separately, in a dictator experiment.

The experiment gives evidence of an asymmetry in the norm-profile: people judge an allocation that is preferable to the recipient as socially appropriate, while they tend to judge an action that is preferable to the decision maker as inappropriate. Thus, the norm profiles tells us that people care about more than purely the distribution.

The main social norm is to split the money equally, and more than half of the participants comply. However, although people agree more about what is considered socially inappropriate than about what is considered socially appropriate, the action-guiding power of such norms are very small: almost half of the participants violates the social norm by allocating more than half to themselves. Such results suggests that modeling behavior as a tradeoff between compliance to a social norm and monetary payoffs would be able to give better predictions.

The data was analyzed with the statistical software Stata/IC 14.1 and Microsoft Excel 2016.

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Chapter 1: Introduction

“How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except for pleasure of seeing it” (Smith 1976 (1759), I.I.1).

Experiments show that minor changes in procedures and instructions alter behavior in dictator games dramatically (Hoffman et al. 1986; Fehr and Schmidt 2006; List 2007; Levitt and List 2007). The evidence of contextual features’ effect on behavior has led to skepticism, i.e. regarding the value of generalizing from the lab-results to the field (Levitt and List 2007), as well as doubting stable preferences (Levitt and List 2007). However, there is evidence of social norms accounting for the observed changes in behavior (e.g. Andreoni and Bernheim 2009; Konow 2010; Krupka and Weber 2013).

The founding father of modern economics, Adam Smith wrote about moral rules of conduct – certain principles by which we *naturally* judge people’s behavior by (Smith 1976 (1759)). The rules regarded what was appropriate behavior within a certain society. Smith saw these rules being the results of continual observations of the reactions certain actions provoked in others, dependent on the specifics of the situation. Hence process which we judge other by is heuristic, not the result of a deliberate calculation.

Smith’s moral rules of conduct have several similarities with social norms, e.g. that once the social norm is internalized, its impact on behavior is not due to deliberate calculations –it is following rules based on experience. However, norms is a more modern term and a concept highly associated with sociology.

The traditional view of norms belongs to Emile Durkheim’s tradition which states that norms are made up of stable expectations of the social environment and that they are backed and sustained by some form of sanctioning. For a norm to be considered “social”, it has to be jointly recognized by members of a society. Hence, it makes them a part of the social system, though their existence is independent of the individual (Høgsnes 1994). The power of social norms thus comes both from human’s willingness to sanction others deviating from the norm

and from people's own emotional experiences after the following of or deviation from the norm.

Elster's (1989a) definition of social norms concerns behavior rather than outcomes. Thus, norm-guided behavior is not outcome-oriented. The motivation of norm-guided behavior is thus not the outcome of the action, but rather compliance to the norm. Smith also saw individual actions as driven by the propriety of conduct, and thus not solely by the utility derived by the outcome; "Smith models rational processes, not a welfare and end-maximizing equilibrium of outcomes" (Smith 2016: 262).

To operationalize Elster (1989) definition of social norms, I will avail the norm elicitation method of Krupka and Weber (2013). Their method for eliciting social norms aims to make norms quantifiable. The norm eliciting method has been used in several published experimental papers (e.g. Erkut et al. 2015; Veselý 2015; Kimbrough and Vostroknutov 2015; D'Adda et al. 2016), granting the method legitimacy. Testing the robustness of the method, Erkut et al. (2015) finds that their elicited norms are insensitive to the given role of the respondent, that being a dictator, recipient or an impartial spectator. This evidence support the method as favorable for studying social norms.

The overall aim of this thesis is to study whether social norms help explain behavior. It puts the norm elicitation method of Krupka and Weber (2013) in Adam Smith's theories of moral behavior. More precisely, the first main part of the analyses bases it hypothesis on Smith's theory of moral rules of "justice" being more precise than those of "beneficence". The essence of the method is a coordination game where the subjects are incentivized to match the modal answer, and thus to reveal their beliefs of modal evaluations.

To further ensure the validity of norm eliciting method, one experiment entails evaluating one's own moral behavior. If the measured evaluation is in fact representative of a social norm, then one's evaluation of the morality of one's own behavior should correspond to the evaluation of others behavior in an identical situation. To best test whether this is the case, I conduct the norm elicitation experiment with a within-subject design. However, the original method is of a between-subject design. To test if there are any problems i.e. demand effects, a smaller experiment with a between-subject design is also conducted.

The second main part of the analysis test whether the elicited social norms can explain behavior. To study behavior, a dictator game experiment with the same treatment-conditions as the norm elicitation experiment is conducted.

If the norm eliciting method in fact measures social norms, something other studies indicates that it does (Erkrut et al. 2015; Kimbrough and Vostroknutov 2015; D`Adda et al. 2016), the operationalization is relevant for economic decision-making theory. My belief is that including social norms into economic theory is enriching an already diverse and rich field of economics.

I will start by presenting related literature on dictator games and the on inclusion of social norms in behavioral and experimental economics, as well as the norm elicitation method of Krupka and Weber (2013). Then, I will introduce Adam Smith`s moral philosophy regarding his moral rules of conduct, and thus show that though incorporating social norms in economic theory might be seen as an innovation, it is in fact an old heritage from the discipline`s founding father. Thereafter the experiments with its design, procedure and results are disclosed, before I finally offer some concluding remarks.

Chapter 2: Related literature

In this chapter related literature will be presented. First on the dictator game as a method and its results. Thereafter relevant work on incorporating social norms in economic analysis and theoretical models is presented, before finally the norm elicitation method of Krupka and Weber (2013) is introduced.

2.1 The dictator game

The dictator game has become a workhorse in experimental economics (Engel 2011). The game equals the first-mover play of an ultimatum game. As the recipient is without veto power, the game is without any strategic concerns.

The original dictator game experiments (Kahneman et al. 1986b; Forythe et al. 1994) were used to help determine the extent to which generous offers in ultimatum games occurred due to fair-minded proposers or due to a fear of having their offers rejected (Camerer and Thaler 1995). The result suggested that both were plausible explanations, as offers were lower, but still positive.

Since then, the dictator game has been conducted several times. In a meta-study of 129 published dictator game results, Christoph Engel (2011) finds that the most common choice is to keep all to oneself. To be precise 36,1 percent of the dictators act in line with the predictions of a model of pure payoff maximizing. Thereafter the second most common choice is an equal split (16,7 percent). However, behavior is sensitive to contextual features (Engel 2011).

Contextual changes and manipulations have also shown to alter behavior in dictator games. One example of this is that manipulating the permissible action set, e.g. by including an additional option of taking money (List 2007, Bardsley 2008). When the action set includes the opportunity to take money, giving nothing is no longer the most greedy option, and smaller gifts sufficient to separate oneself from the most selfish types (Dreber et al. 2013). Finding that fewer agents were willing to transfer money when the action set include taking, the results left List (2007) to question the interpretation of dictator giving as a sign of generosity.

As a dictator game is ultimately about distribution, one should expect dictators to give more if the recipient's claim is made more legitimate (Engel 2011). One way of manipulating legitimacy is through the assignment of property rights. Bohnet and Frey (1995), and Oxoby and Spraggon (2008) finds that the stronger the property rights, the more one will obtain in dictator games. There is also evidence of the dictator's donations being reduced when the dictator has made an effort and earned the sum available for distribution (Hoffman et al. 1994; Ruström and Williams 2000; Cherry et al. 2002). Feeling more entitled to the money they have earned, compared to windfall gains in experiments, people share less.

Who is initially granted the money, is also related to entitlement. For the "bully" variant of the dictator game (Eichenberger and Oberholzer-Gee 1998), money is initially allocated to the recipient. However, the dictator is granted allocation rights. The game is nevertheless about distribution. If people solely have distributional preferences, and if such preferences are indifferent to who granted the money, the manipulation should not affect behavior. In addition, property rights can be viewed as a social convention (Alchian and Demsetz 1973). Alchian and Demsetz (1973) defines the strengths of property rights by the extent to which an owner's decision about how a resource are to be used actually determines the use.

However, the manipulations of the "bully" game has shown to affect behavior relative to the standard dictator game (e.g. List 2007; Krupka and Weber 2013). While Krupka and Weber (2013) finds evidence that this is due to the payoff-equivalent situations being governed by different social norms, one could just as easily explain it by saying that people's distributional preferences change with who is initially granted the money. In addition, it is worth mentioning that Dreber et al. (2013) finds no treatment-effect in his "bully" experiment.

Behavior in dictator games' sensitivity to contextual features show how results are not very robust to treatment effects (Camerer and Thaler 1995; Falk and Fischbacher 2006; Levitt and List 2007). Such evidence led Levitt and List (2007), among others, to doubt the external validity of laboratory experiments measuring social preferences. However, the evidence is consistent with the alternative explanation of social context serving as a coordination device – entering the subjects' beliefs rather than their preferences (Ellingsen et al. 2012; Dreber et al. 2013). Hence, the presence of social framing effects does not prove that preferences are sensitive to context (Rabin 1998; Fehr and Schmidt 2006). However, it can also be explained by social norms.

2.2 On incorporating social norms in behavioral and experimental economics

In economics, social norms are often studied indirectly or incorporated only as post-hoc explanations for behavior and outcomes that are otherwise hard to explain. The fact that social norms are often vaguely defined, making them difficult to operationalize or draw predictions from is often mentioned as a reason why (Bicchieri and Chavez 2010; Krupka and Weber 2013). This sub-chapter will nevertheless review relevant work done on incorporating social norms in behavioral and experimental economics, within both analytic and economic frameworks.

Extracting norms through observed behavior, as a kind of revealed preference, implies an indirect identification of the norm (Fehr and Smidt 1999; Bolton and Ockenfels 2000; Andreoni and Miller 2002). However, this approach to infer norms is not only ad hoc, but fails to distinguish between collective habits and social norms. Neither does it give basis for distinguishing between preferences for specific outcomes and preferences for norm compliance (Bicchieri 2006; Burks and Krupka 2012).

By contrast, Krupka and Weber (2009, 2013), and Andreoni and Bernheim`s (2009) studies social norms directly. Manipulating the presence of social norms by varying the features of the choice context, they both find that the resulting changed behavior is consistent with the preference for complying with the current social norm. Benjamin et al. (2010) also finds that preferences are dependent on social context and social identity.

A social norm is a collectively held perception within a population (Elster 1989a). It is a longstanding tradition in psychology to distinguish between collectively held norms and personal ethical opinions (Schwartz 1973; Elster 1989a and 1989b), as they need not overlap. To distinguish between the two, Burks and Weber (2012) use an incentivized experimental method (the same as Krupka and Weber 2013) where the subjects are asked to match a target, and for the personal ethical evaluations. However, they are not incentivized.

The reactions provoked in others by our behavior, often in the form of informal sanctions, leads to maintaining and enforcement of social norms in a society (Høgsnes 1994; Fehr and Gächter 2000; Bénabou and Tirole 2006). Thus, it has been seen as beneficial to study norms in sequential games where people are able to react to other`s actions (e.g Fehr and Fischerbacher 2004).

How social norms impact behavior is easily incorporated into an otherwise standard utility maximization framework (e.g. Kimbrough et al. 2014; Levitt and List 2007). In newer studies they are often incorporated in social preference models that revolve around the hypothesis that people trade-off material benefit against compliance with a social norm (e.g. Andreoni and Bernheim 2009; Konow 2010; Krupka and Weber 2013). As social norms are by definition context-specific, such social preference models are able to account for why behavior in dictator games are sensitive to context (see subchapter 2.1).

Without trying to discard the rational choice models, it has been argued that the “Appropriateness Framework” (AF) may have a greater explanatory power than the expected utility framework (EU), especially if social dimensions are apparent. The framework is based on March’s “Logic of Appropriateness” (1994), an idea of a decision process involving i) situational recognition, ii) identity, and iii) rule based choice. The AF has a large emphasis on decision making as a heuristic and rule driven process, turning EU into only one of many decision rules that might apply to a situation (Kopleman et al. 2004).

Regarding the evidence of behavior in dictator games being sensitive to context, AF highlights that labels and descriptions used to frame a situation, will evoke different interpretations of the situation and what is considered appropriate. Thus, the frames will cause different behavior in otherwise identical situations (March 1994; Messick 1999; Kopleman et al. 2004). This holds even though the economic structure is described and understood (Messick 1999). Within the AF the rules applied to choices will often be a consequence of social norms, as they are “guidelines for socially appropriate behavior” (Cialdini et al. 1999: 195).

Nevertheless, whether one models social norms with an EU or an AF framework, one question remains: as social norms are context-dependent, how can one mathematically model a contextual features` impact on behavior? If Krupka and Weber`s (2013) norm elicitation method is providing a method for quantifying social norms, it is a step in the right direction.

2.3 The norm elicitation method of Krupka and Weber (2013)

Offering evidence of how behavior in the dictator games change due to social norms, the norm elicitation method of Krupka and Weber (2013) is an important contribution and an innovation to the literature and to experimental methodology. Primarily due the novelty of their norm elicitation method: making social norms quantifiable.

“Allowing norms to govern actions, rather than outcomes, suggests that two actions that produce the same outcome, but differ in other respects, may be governed by different social norms” (Krupka and Weber 2013: 498)

Krupka and Weber (2013) argue that behavior`s sensitivity to contextual features in experiments can be interpreted similar to how behavior in society is sensitive to context. Standing as a counter notification to the skepticism posted by Levitt and List (2007), they turned what previously had been seen as a violation of stable preferences into an argument for including social norms in economic models.

Krupka and Weber (2013) characterize the social norm by the *profile* of appropriateness ratings over all the actions available to the decision maker. This is in line with John Elster`s (1989a) definition of social norms. To enable quantification of social norms, they formalize Elster`s (1989a) definition of social norms. $A = \{a_1, \dots, a_K\}$ denotes all the K actions available to the decision maker. A social norm is attached to each of the available actions. The social norm $N(a_k) \in [-1, 1]$ is an empirically measurable collective judgement, stating the actions` appropriateness ($N(a_k) > 0$) or inappropriateness ($N(a_k) < 0$). If an action is considered inappropriate, the social norm is that the action should not be taken.

To form the norm profile, elicitation is done by the respondents playing a pure matching coordination game. As norms reflect collective perceptions (Elster 1989), the coordination game is considered a suitable method. Respondents are incentivized to match the modal answer i.e. respond according to the majority. Thus, they are not incentivized to reveal their personal preferences.

As the pure coordination games have many equilibria, excluding a natural focal point is important. Thus, the evaluations are done on a four-point scale without a middle evaluation

category. A large degree of coherence in the answers should thus imply the existence of a social norm. As demonstrated by Metha et al. (1994) and Sugden (1995), the prominence derived from a common culture and shared experiences can create focal points in pure coordination games.

As Krupka and Weber (2013: 501) writes themselves: "...our elicitation method will yield a representation of a social norm if (a) there is general social agreement that some actions are more or less socially appropriate, constituting the social norm, and if (b) respondent attempting to tacitly match others` responses rely on such shared perceptions to help them do so."

Based on the hypothesis that people trade-off material benefit against acting in compliance with a social norm¹, behavior is modeled within the framework of the following utility function:

$$u(a_k) = V(\pi(a_k)) + \gamma N(a_k) , \quad (1)$$

$N(a_k)$ being the elicited social norm of that action, $\pi(a_k)$ representing the monetary payoff produced by that action. An individual`s utility of a particular action is dependent on the degree to which the individual cares about complying to the norm (γ) and the value placed on the monetary payoff (derived from the function $V(\cdot)$). According to this model, an individual who is entirely unconcerned with social norms ($\gamma = 0$) will select the payoff-maximizing action. It also follows that if $\gamma \neq 0$, an individual`s behavior will be dependent on the social norm ($N(a_k)$). Such preferences suggests that behavior will change substantially across situations governed by different norms, though the sets of payoff remains identical.

Imposing a linear restriction on $V(\cdot)$, Krupka and Weber (2013) estimate the utility function of equation (1), using both the elicited norms and behavioral data from the dictator experiment. As I understand it, the estimation is based on the already elicited data, which makes for predictions within the sample. Thus, it is not a traditional prediction per se. In addition, they solely postulates the trade-off between social norms and payoffs without giving an explanation. Hence, their utility function does not deepen our understanding of why people care about conducting to social norms. Still, it offers a model of observed human behavior in social contexts where social norms apply.

¹ A hypothesis also shared by e.g. Andreoni and Bernheim 2009, Konow 2009 and 2010

While modifying the standard assumptions, Krupka and Weber (2013) are still within the borders of conventional economic theory. This can be viewed as a form of post-rationalization where social norms are included as an assumption. While their model does not comment on how the norms emerge, it makes them quantifiable and thus enables them to study how they affect behavior.

The methodical core of Adam Smith's moral theory differs from standard economic theory, and therefore also from behavioral economics (Tjøtta 2015). In this respect, the utility model of Krupka and Weber (2013) is not in line with Smith's theories concerning how moral rules of conduct affect human behavior. It is not the case that Smith denied monetary payoffs as a source of human motivation. Nevertheless, for this experiment, I will only use the norm elicitation method, and base the predictions of human behavior solely on social norms.

Chapter 3: Including Social Norms in Economics -an innovation or old heritage?

The word 'economics' originates from the Greek word "oeconomicus" (oikos (house) and nomos (laws or rules)) (Kishtainy 2017). However, "nomos" translates into rules and hence does not imply norms, but rather to economics` search for objective economic rules of how the economy functions.

Adam Smith also searched for objective laws on how the economy functions. Smith is classified as a Scottish enlightenment philosopher. Living in Scotland in the starting phase of the industrial revolution, he aimed to describe the changes he observed in society.

As a moral philosopher, Smith aimed to provide an understanding of how moral behavior and practice arose in societies (Haakonssen 2002). His science was built on empirical observations (Haakonssen 2002), obtained by studying human actions in regular situations. His book *Theory of Moral Sentiments* (TMS) (1759) has been said to be a study of "the process by which we learn the principles of morality from the experience of common life." (Nicholas Phillipson 2012: 150)

Though *The Wealth of Nations* (1776) is what Smith is most known for, his first but also last published book²; TMS has recently received newfound interest. Especially by behavioral and experimental economists, e.g. by Camerer and George (2004:5) who thinks TMS has "laid out psychological principles of individual behavior that are arguably as profound as his economic observations."

The fact that TMS has been rediscovered may be due to its theories being quite modern. The theories are based on observations of human behavior. In addition, it contains several antecedents of the current developments within the field of behavioral economics, i.e. Kahneman and Tversky`s (1979) concept of loss aversion, and reciprocity as a determinant of human behavior (e.g. Kahneman et al. 1986a; Fehr and Gächter 2000; Ashraf and Camerer 2005).

The remaining parts of this chapter offers an explanation of Smith`s moral philosophy, especially his theory of what he called "moral rules of conduct" –a theory based on

² TMS was first published in 1759, and then revised six times. The latest revised version was published in 1790.

observations of what humans judge as moral or immoral. I like to think of Smith's moral theories as a positive economic theory of normative opinions in society. The "nomos" in Smith's "economics" might just imply social norms. Thus, incorporating social norms in economics can be viewed as heritage from Smith himself.

3.1 Smith's moral philosophy

To better understand Smith's moral philosophy, I find it useful to relate it to his political philosophy. Especially his critique of Thomas Hobbes' *Leviathan* (1996 (1651)) - one of the main works of the previous century. Whereas Thomas Hobbes believed the social contract vindicated in the state as a necessity to avoid a "war against all", Smith did not think a stateless society necessarily implied a lawless one.

"How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except for pleasure of seeing it" (Smith 1976 (1759), I.I.1).

The quotation is the first sentence of TMS, belonging to the chapter "Of sympathy". The sentence tells a lot about Smith's theory of human behavior. Primarily, it tells us that even though Smith did not deny humans to be selfish, his observations also gave evidence of people taking interest in other humans, and its necessity for human happiness. This was something that came naturally - a part of human nature. In addition, it tells us that Smith did not think in the lines of utility maximizing when explaining human behavior. Rather, his theories of human behavior is one of moral, imagination, sympathy, experience, an impartial spectator, and of moral rules of conduct.

So whereas Hobbes' reasoning for a "war against all" came from what he described as the selfish nature of human beings, Smith took another view. Though he did not deny humans' selfish nature, he believed in a "mutual sympathy" between people, working as a motivation for the evolution of moral rules of conduct with or without the state's existence. Thus, a stateless society did not necessarily imply a lawless one.

3.2 Sympathy through imagination

“By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments, we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his sensations,”
(Smith 1976 (1759), I.I.2)

Smith`s concept of sympathy is based on imagination *only*. When observing others, one can never really know what another person is sensing, nor can we be certain of his intentions. Observing the circumstances and behavior, one can only imagine others sensations and intentions. However, not only an action`s outcome, but also the perceived intentions of the actor is of importance to economic decision making (Brandts and Sola 2001; McCabe et al. 2003; Offerman 2002; Falk et al. 2003 and 2008; Veselý 2015).

According to Smith, the imagination constitutes a mental faculty used to create a distinctively human sphere within the ‘real’ world (Haakonssen 2002). It is through sympathy, as formed by our imagination that the moral world is created. When observing others, it is through our imagination we feel sympathy, and it is dependent on the characteristics of the situation.

Smith`s concept of sympathy differs from how the term is commonly used (Haakonssen 2002). When explaining the term in TMS, he begins with the ‘the sense of propriety’, i.e. the judgment of correctness or whether something is right or wrong. To Smith, moral approval was a result both of sympathy with the agent and the person affected by the agent`s action (Raphael 1972).

“To approve of the passion of another... , is the same thing as to observe that we entirely sympathize with them; and not to approve of them as such, is the same thing as to observe that we do not entirely sympathize with them” (Smith 1797: I.III.1.)

When assessing the *morality* of other`s actions one act as an impartial spectator. One first imagine oneself in the shoes of the agent. If the actor acts as the impartial spectator would act in a particular situation, sentiments correspond. The correspondence is one of sympathy.

Consequently, it causes approval of the agent's motive as one finds it to be "proper" or "appropriate".

The act of sympathetic understanding is a creation of the imagination. It is an imagined reasoning for the observed behavior (Haakonssen 2002). This implies that as moral agents, other people and we ourselves are creations of our own imagination. We only gain self-consciousness through our relationships to others, i.e. through society.

"Bring him into society, and he is immediately provided with the mirror which he wanted before. It is placed in the countenance and behaviour of those he lives with, which always mark when they enter into, and when they disapprove of his sentiments; and it is here that he first views the propriety and impropriety of his own passions, the beauty and deformity of his own mind." (Smith 1976 (1759), III.I.3)

According to Smith, society, with its moral rules, mirrors our actions by the reactions provoked in others. These reactions thus enforce the moral rules. The power of the moral rules stemming from peoples' reactions are a common feature with social norms (Elster 1989, Fehr and Gächter 2000, Lopez-Perez 2008, Krupka and Weber 2013). It is our understanding of other's view of us, given the circumstances we find ourselves in, that shapes our view of who we see ourselves as. Without being a part of society, one cannot judge the morality of one's actions.

As impartial spectators, we also take into account the feelings of the person affected by the action of the agent. This a 'second sympathy' (Raphael 1972). It is the conjunction of these two sympathies that give rise to the 'sense of merit' of the action. Having double sympathy, one judges the action of the agent as 'meritorious', i.e. to deserve the reaction it causes in the one affected by his action.

3.3 The moral rules of conduct

When it comes to judging our own actions and sentiments, Smith seems to think it happens in much of the same way of which we judge others:

“to examine our own conduct as we imagine any other fair and impartial spectator would examine it. If, upon placing ourselves in his situation... we approve of it, by sympathy with the approbation of this supposed equitable judge. If otherwise, we enter into his disapprobation, and condemn it.” (Smith 1976 (1759), III.I.101)

The *principles* that we judge behavior by are what Smith calls ‘moral rules of conduct’. They are rules of what is considered appropriate. They are positive and based on experience of people’s reactions, and from continual observations. Though a more modern term, Smith’s moral rules can relate to social norms on several levels, e.g. that they both are abstract rules separating appropriate and inappropriate behavior. Furthermore, they are both depending on the situation, i.e. context specific.

“Every step and every movement of the multitude, even in what are termed enlightened ages, are made with equal blindness to the future; and nations stumble upon establishments, which are indeed the result of human action, but not the execution of any human design.” (Ferguson, 1995 (1767): III.II)

Viewing social rules as the result of an evolutionary process, alien to human design, was common among the Scottish enlightenment philosophers. Emerging from mutual sympathy, moral rules of conduct are the result of an evolutionary process, based on experience. This makes Smith’s theory inductive (Tjøtta 2015). As for social norms, judging the conduct of character is not a contemplated, calculated action.

“He desires, not only praise, but praiseworthiness; or to be that thing which, though it should be praised by nobody, is, however, the natural and proper object of praise. He dreads, not only blame, but blame-worthiness; or to be that thing which, though it should be blamed by nobody, is, however, the natural and proper object of blame.”(Smith 1976 (1759), III.I.8)

According to Smith, people want to do right and be righteous and dislike blame. Not only do they want to be perceived as a praiseworthy person, they want to *be* praiseworthy (Tjøtta 2015). Being social beings, people also want to share or sentiments with other people. They also long for mutual sympathy; “nothing pleases us more than to observe in other men a fellow-feeling with all the emotions in our own breast; nor are we ever so much shocked as by the appearance of the contrary” (Smith 1976 (1759), I.II.1).

Mutual sympathy can thus be considered as a motivation for compliance to the moral rules. Nevertheless, individual action is only limited by the rules of conduct to the extent that they themselves wanted to comply. However, by internalizing the external spectator we try to anticipate the assessment which will be imposed on us. This anticipating sympathy enables us to adjust behavior to avoid any potential conflict (Haakonssen 2002). This also applies to actions conflicting with our own self-image. To Smith, human action is more motivated by one`s own ego, than they are outcome-oriented.

3.4 Justice and Beneficence

In TMS Smith concludes that throughout history, there has existed a dividing line between the ‘negative’ virtue of justice and the ‘positive’ virtues such as benevolence (Haakonssen 2002). Justice is a ‘negative’ virtue as it requires abstinence from injury of others, and beneficence a ‘positive’ one as it concerned the promotion of good for others or oneself.

Due the uncertainty of man`s life and heterogeneity in individuality and cultures, Smith saw it as impossible to formulate a universal rule of a good life. Hence, the positive virtues could only be characterized in very general terms. Without knowing the other person, the action-guiding powers of the positive virtues was small. Thus, the general rule of beneficence was loose and inaccurate, making it difficult for the state to regulate people`s conduct according to these rules.

By contrast, to cause *anybody* harm, can be recognized by every man as harmful. In turn, the virtue of justice regulates behavior between strangers. Accordingly, the negative virtue of justice is much more precise than the positive ones. In fact, Smith viewed justice to be so rule-bound that it could be the subject of systematic treatment, e.g. the foundation of jurisprudence (Haakonssen 2002).

The virtue of justice and beneficence translated into different moral rules of conduct. While justice is rules of the kind “do not harm other people, even strangers” or “keep your promise”, beneficence is rules like “be good to your neighbor” (Tjøtta 2015). Justice primary required individuals to refrain from hurting others with intent (Raphael 1972), whereas acts of beneficence are acts that are done with proper motives and deserve reward. They are the proper objects of gratitude.

Smith observed that humans even without ever reflecting upon the necessity of justice for the order and existence of society, loathe injustice and agree about the necessity of punishment of unjust acts (Ashraf 2005). Justice was the main pillar, upholding the order of society: “If it is removed, the great, the immense fabric of human society...must in a moment crumble to atoms.” (Smith 1976 (1759), II.II.18). The rules of justice were comparable with rules of grammar as they were precise, accurate, and indispensable.

However, rules of beneficence are loose and imprecise. Hence, beneficence is ‘free’, in the sense that; as long as it does no positive harm to others, failing to provide an act of beneficence does not deserve punishment (Raphael 1972). Nevertheless, it might cause resentment. Beneficence is thus not enforceable with the threat of punishment. When observing acts of beneficence, the actor is not motivated by escaping punishment. However, justice is not free, as it is enforceable by the threat of punishment. However, Smith observed that there was a strong agreement that the violation of justice ought to be punished (Haakonssen 2002). Compliance to justice however, did not necessarily make for a praiseworthy character. This implied an *asymmetry* in reactions from third parties when it came to norm violations and compliance of the two types of norms (Haakonssen 2002).

Table 1: The asymmetry in people`s reactions

	Justice	Beneficence
Violating the norm	Punishment	May provoke disapproval
Following the norm	No reward	Reward

The asymmetry in people`s reactions will later be used in the design of the experiment and for the analyses –exploiting it to study the moral rules of justice and beneficence. However, punishment and reward will be in the form of positive and negative evaluations of the actions undertaken by the decision maker, respectively.

Chapter 4: The Experiments

4.1 Experimental design

The aim of the experiment is two-folded, though coherent. First, I aim to test Adam Smith's theories of moral rules of conduct on elicited social norms, and on participant's evaluations of their "own" behavior. I will use the norm elicitation method of Krupka and Weber (2013). Based on the elicited norms, I will make predictions regarding actual behavior. Behavior is observed separately, through a dictator game experiment. The dictator experiment will have identical treatment-condition as in the norm elicitation experiment. The treatment-condition consists of framing the action as "to take" or "to give".

The experiments are based on a distributional situations where randomly selected "Person A" and "Person B" together own a common pool of 1000 NOK (\$115). However, "Person A" is granted the provision rights, which relative to "Person B" grants him a higher level of property rights (Alchian and Demsetz 1973).

Evidence suggests that as the windfall earnings stems from a commonly owned pool, an equal split will presumably be the most social appropriate and acceptable distribution (e.g. Andreoni and Bernheim 2009). If so, the dominant social norm becomes "Split the windfall equally." However, this being the social norm for this particular experiment is only a presumption.

Concerning the hypothesis for the social norms, they are based on the following quotations from TMS:

- i.) "The rules of justice may be compared to the rules of grammar; the rules of the other virtues, to the rules which critics lay down for what is sublime and elegant in composition. The one, are precise, accurate, and indispensable. The other, are loose, vague, and indeterminate..." (Smith 1979, III.I.123).

, and the subtitle added at the 4th addition of TMS:

- ii.) "An essay towards an analysis of the principles by which men naturally judge concerning the conduct and character, first of their neighbors, and afterwards of themselves."

Turning these quotations into testable hypothesis, they become as follow: i.) "Evaluations of the "injustice domain" will be more precise than the evaluations belonging to the

“beneficence domain”, and ii.) “One’s own evaluations of one’s hypothetical actions will be similar to that of identical acts done by others in an identical situation.”

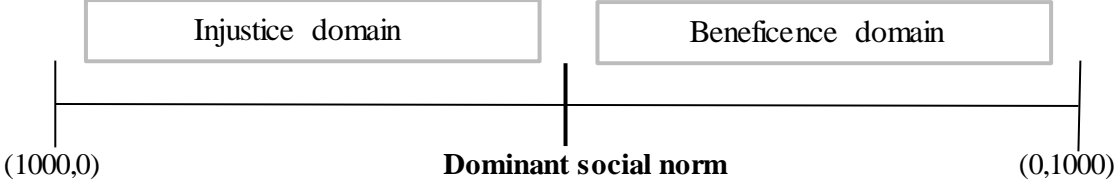


Figure 1: Injustice- and Beneficence in payoff domain, payoff (decision maker, recipient)

Exploring the asymmetry in people’s reactions (see table 1), figure 1 shows the “injustice” and “beneficence domain”. The “injustice domain” is defined by the actions which are evaluated as socially inappropriate, and hence actions that should not be undertaken. Condemning the actions as inappropriate can be interpreted as a form of punishment. On the other hand, the “beneficence domain” will consist of the actions evaluated as socially appropriate.

The dominant social norm is given by the most socially acceptable/ least unacceptable action. It seems reasonable to believe that the dominant social norm will be to split the common pool equally (Andreoni and Bernheim 2009). If so, it is reasonable to assume that the “injustice domain” will be defined by all actions where the decision maker allocates more than half to himself. Likewise, the “beneficence domain” will consist of the actions where the decision maker allocates more than half to the recipient. I presume those actions to be evaluated as socially appropriate, and accordingly one is free to make them without facing negative reactions from others (Haakonssen 2002). If so, this would fit with the asymmetry in people’s reactions.

To best study whether people evaluate their own actions in line with how they evaluate those of others, the norm elicitation experiment is conducted with a within-subject design, i.e. each individual evaluates all the hypothetical situations. However, to my knowledge this has not yet been done. Nevertheless, as the incentive is to match the modal answer, there is reason to

believe that it can be conducted as a within-subject experiment. To test for any problems e.g. demand effects, the experiment is also conducted with a between-subject design.

The experiments are conducted with two different frames of the action. The distributive action is either framed as “to take” or “to give”. These treatment-conditions are done to check whether the elicited norms are connected to/ dependent on the wording, or if it constant across the treatment-condition. If the social norm is robust across treatment-conditions, it is reasonable to presume it rather to be connected on the other contextual features. It might be reasonable to believe that “to take” is more associated with injustice, while “to give” is more associated with beneficence. If so, it should influence the norms respectively, and the framing will lead to two different social norms.

Futhermore, if people solely have preferences over distributions, the treatment effect should have no effect as the available action set are identical in both situations. If people only base their evaluations on the allocations made, the evaluations will be symmetric. In other words: their evaluations of two payoff-equivalent actions that only differ with respect to whether it is “Person A” or “Person B” who is granted which amount, will be evaluated identical, i.e. their evaluations are indifferent the role of the decision maker.

4.1.1 The norm elicitation experiment

The norm elicitation experiment is based on the method of Krupka and Weber (2013). However, in this experiment, the method will be conducted both with a within- and between-subject design. The elicited norms of this experiments was used to test the hypothesis based on Smith`s moral rules of conduct, and used to make new predictions of actual behavior. The experiment was conducted with both a within- and between-subject design.

To elicit the social norms, participants are asked to evaluate three different *hypothetical* situations where of a “Person A” faces different possible action choices. The action choice is either framed as “to give” or “to take”. They are asked to evaluate each action on a four-point scale going from “very socially inappropriate”, “somewhat socially inappropriate”, “somewhat socially appropriate” to “very socially appropriate”. To avoid a natural focal point, there is no middle or neutral category.

The appropriate-ratings made for the primary outcome measured in this experiment, and are denoted as $N(a_k)$. The ratings are turned into a scale of social appropriateness $[-1, 1]$, where

“very socially inappropriate” and “very socially appropriate” represent each endpoint, respectively. Furthermore, I assume that the distance between the categories are equal. Thus, “somewhat socially inappropriate” and “somewhat socially appropriate” is given the value minus one third, and one thirds, respectively. Furthermore, I assume both endpoints to be at an equal distance from the neutral point, zero, which separates socially appropriate from the socially inappropriate.

To avoid any misunderstandings, the participants were presented with an example of people’s reaction to a socially inappropriate action. They were told that a socially acceptable action was to be understood as what most people agree to be a "correct" or "ethical" thing to do. The instructions (see Appendix B) then presented the participants with an example of a hypothetical situation, as well as an example of how they might indicate their ratings for each action for the given situation³.

The participants were then presented with the monetary incentive: for one randomly selected action, three of the participants who’s evaluation matched the modal rating, would be randomly selected to be paid an additional 500 NOK (\$60). This gave the participants salient incentives to respond in line with what they truly believed to be the modal rating for each possible action available to “Person A”. The monetary incentive was written in bold letters. In addition, the participants were reminded of this incentive in each of the situations, except for the one where they were asked to evaluate their own behavior.

For the within-subject designed experiment, the participants were then presented with the different hypothetical situations, for which they were to give evaluations. For each action choice, the respective monetary payments to each individual were listed. The order in which the hypothetical situations were presented was not randomized. For two of the hypothetical situations the subjects are asked to evaluate the actions of others, and paid to match the modal answer.

For the last evaluations, the participants of the within-designed experiments were asked to evaluate the actions as if it was conducted by themselves. This evaluation has no monetary incentive. Just as the Burks and Krupka (2012) experiment, the subjects are asked to reveal their own personal beliefs. The experiment was conducted both with a within- and a between-subject design, but the evaluation of one’s own hypothetical behavior was only part of the

³ In the example (also listed in Appendix B), “Person A” finds a wallet at a coffee shop. This is the same example as Krupka and Weber (2013) uses.

within-subject designed experiment. Regarding the between-designed experiment, the participants were only presented with one of the two treatment-conditions.

4.1.2 The dictator experiment

To study actual behavior, two different variations of the dictator game were conducted, each matching one of the hypothetical situations in the norm elicitation experiment. The only difference between the two was the framing of the action. In one treatment condition the action was framed as “to take” money from the common pool, and in the other, it was framed as “to give”. The experimental design of the dictator experiment had a between-subject design, as one participant was presented only with one of the two versions.

After being asked to fill out some personal characteristics, the participants were given some information regarding the experiment, i.e. the monetary incentive. In each session, two participants were randomly selected to get one of their decisions realized. They were informed that being selected was independent of which decision they had made.

Each participant was then presented with a dictator decision. The participants were randomly assigned to one of the two treatment-conditions. The formulation of the description of the situation was made in general terms to match the formulation of the hypothetical situation in the norm elicitation experiment as much as possible⁴.

Then, the participant was asked to make a decision as if they were “Person A”. Depending on the treatment-condition, they were asked how much they wanted to take/ give. The decisions of the amount they would like to take/ give represent the primary outcome measured in this experiment. When making their decision, they would tick off an alternative in a table as the one presented in figure 1. Figure 1 shows the alternatives when the action is framed as “to take”.

Table 2: Table for decision-making, “take” dictator game

I choose to take:	Your answer:
Nothing (0 NOK for you, 1000 NOK to Person B)	
250 NOK (250 NOK for you, 750 NOK to Person B)	
500 NOK (500 NOK for you, 500 NOK to Person B)	
750 NOK (750 NOK for you, 250 NOK to Person B)	
Everything (1000 NOK for you, 0 NOK to Person B)	

⁴ Instructions for the dictator experiments can be found in Appendix A

4.2 Experimental procedure

The experiments were run together with another master student at the University of Bergen, Sondre Vågenes Michelsen. This mainly entailed two things: i) for the within-subject designed norm-elicitation experiment, each subject evaluated five different situations whereof three belonged to this experiment. The order was not randomized and as follows: 1) “to give” treatment condition, 2) other experiment, 3) “to take” treatment-condition, 4) other experiment, 5) evaluations of their own hypothetical behavior. ii) For the dictator game experiment, each subject took two decisions. Each of the two dictator games were paired with another decision-making experiment, and the order was randomized.

4.2.1 Within-subject designed experiment

The experiment consisted of four sessions, all conducted by pen and paper. A total number of 119 students participated⁵. Each participant was only able to participate in one session, and excluded from participating in the dictator game experiment. The sessions were run the same day and place as the dictator game experiment, 28th of February 2017 at the Citizen Lab at the DIGSSCORE⁶ facilities. The average number of participants per session was 30.

All of the participants were recruited through Hroot⁷. One week before the experiment took place, registered Hroot-members got an invitation email (see Appendix C). The invitation included information about time and place, as well as the show-up fee of 50 NOK (6 USD), incentivizing people to register. 24 hours prior to the experiment, registered participants got an email reminding them of the time and place of the experiment.

Entering the lab, the participants drew an ID-number. The ID corresponding to a placement, separated by partition walls. This was done to ensure the participants to stay ignorant of the other conditions, limit communication and to safeguard their anonymity from the others. The participant's anonymity was also safeguarded by ensuring the double-blindness condition. This was done by having three lab-assistants with specified work tasks during the day of the experiment.

⁵ Of the 120 participants, 40% were men and 60% were women.

⁶ The Digital Social Science Core Facility. Located at Rosenbergsgaten 35, Bergen, Norway.

⁷ Hroot is a registration and organization online tool used by the DIGSSCORE facilities of the University of Bergen.

When seated the participants got some oral information. They were told not to communicate with each other during the experiment, and reminded of who financed the experiment and that it would be used in two Master`s theses. In addition, they were reassured of their choices being kept anonymous.

After the participants were finished evaluating the different hypothetical situations, they were asked to wait. In the meantime, the evaluations were handed to a lab assistant located in a separate room. For one randomly selected action, the evaluations were then sorted according to how the action was evaluated. From the pile with the majority of the ratings, two evaluations were randomly selected to receive an additional 500 NOK (\$58). The money was distributed in the respective envelopes and handed to another lab assistant. The participants were then handed their envelopes, as the lab assistant called out the ID-numbers.

On average, the norm eliciting experiment lasted 23 minutes. The expected payment, including the show-up fee, was 97 NOK (11,5 USD). This amounts to an hourly wage of 252 NOK (31 USD) –a wage above the usual pay for undergraduates in Norway.

4.2.2 The dictator game experiment

The dictator game experiment consisted of four sessions with an average of 30 participants in each. In total, 116 students participated, whereof 30 percent were men and 70 percent were women. Hroot made sure that none of the students had participated in the norm elicitation experiment.

The same experimental procedures applies to this experiment as the within-subject experiment. However, as the experiment had two different treatment conditions, and a between-subject design, some additional measures had to be taken regarding the randomization of the participants.

Prior to the experiment, the two instructions were randomized using Random.org, and distributed accordingly. The randomization of the participants was done by letting them draw an ID-number while entering the lab. The ID corresponded to a seat and the respective randomized instruction. The randomization was thus done at an individual level and a within-session randomization, as well as between-sessions with respect to the already randomized order of the instructions. The participants in the dictator experiments were thus unaware of the different conditions, and only knew of the condition they themselves took part in.

On average the dictator-experiment lasted 15 minutes, and had an expected pay of 106 NOK (13 USD), which amounts to an hourly wage of and 424 NOK (52 USD). This is a wage way above the usual pay for undergraduates in Norway.

4.2.3 Between-subject designed experiment

To test whether the design of the norm elicitation method in the laboratory experiments lead to undesired demand effects, a classroom experiment was conducted. The experiment took place March 30th 2017, at the Norwegian Business School (BI) at an introductory class to statistics for students studying marketing.

Only the norm elicitation experiment was conducted. This time with a between-subject design. The experiment was once again run together with another Master student (Sondre Vågenes Michelsen), and in total, a number of 157 students attended⁸. Before starting the evaluations, a set of instructions was read out loud by the experimenter (see Appendix E). In the instructions they were informed that ten of them would end up with 500 NOK (\$58).

Each of the altogether 78 students participating in my experiment was asked evaluate one situation, being oblivious to it being one out of two different situations. The experiment was conducted by pen and paper, and they were given 5 minutes to finish their evaluations.

⁸ However, this time one participant only answered one treatment-condition, and thus half of the students provided data for my experiment.

4.3 Results

The results are presented as follows: first, I will test whether there are any problems with using a within-design on the norm elicitation experiment. Then, I will test whether there are any treatment effect of framing the action as either “to take” or “to give”. Thereafter, the first main part of the analysis is presented, namely the testing of the hypothesis based on Smith’s theories of moral sentiments. The second main part of the analysis is regarding actual behavior. Based on the elicited social norms, predictions for actual behavior are then presented. The predictions are given the assumption that one can model behavior based on people having a preference to comply to social norms. The predictions are tested using data from the dictator experiment.

4.3.1 Within-subject versus between-subject design

Result 1: *There are no systematic differences between the norms elicited with a within- and a between-subject design.*

The norm elicitation method of Krupka and Weber (2013) has only been conducted with a between-subject design (e.g. Erkut et al. 2015; Veselý 2015; Kimbrough and Vostroknutov 2015; D’Adda et al. 2016). Testing for demand effects, the results of the experiments with a within- and between-design are compared and tested. Table 3 and table 4, show both the evaluations and the test results of a Wilcoxon rank-sum test.

As the Wilcoxon rank-sum tests show, evaluations is only significantly different for the evaluation of “Give 250” (4,209***). However, for each of the other comparable actions, there were no significant differences in the evaluations of those from the within- and the between-subject design.

Though the difference in evaluations of “Give 250” is highly significant, it might nevertheless be a result of noise. If so, this suggests that there are no systematic, if any demand effects with having one individual evaluating both the control and treatment situations. Thus, it should not be any problems with using a within-subject design for these situations. Accordingly, following results and analysis will mainly use the data from the within-design norm elicitation experiment. Regarding the modal evaluations, except for “Take 250” they are identical for payoff-equivalent actions across design and treatment-conditions.

Table 4: Elicited norms (N(ak)) and Rank sum test for differences between within- and between-subject designs (“take”)

Action	Take, between-subject design (n=39)					Take, within-subject design (n=119)					Rank sum test (z)
	Mean	--	-	+	++	Mean	--	-	+	++	
"Take 1000kr"	-0,897	87,2%	10,3%	2,6%	0%	-0,761	78,3%	13,3%	2,5%	5,8%	1,291
"Take 750kr"	-0,162	5,1%	64,1%	30,8%	0%	-0,083	8,3%	52,5%	32,5%	6,7%	0,98
"Take 500kr"	0,983	0%	0%	2,6%	97,4%	0,933	0%	1,7%	6,7%	91,7%	-1,238
"Take 250kr"	0,504	0%	15,4%	43,59%	41,0%	0,600	0,8%	11,7%	34,3%	53,3%	1,238
"Take 0kr"	0,402	10,3%	18,0%	23,1%	48,7%	0,350	12,5%	22,5%	15,0%	50,0%	-0,252

*, **, ***, indicates significance at the 90%, 95%, and 99% level, respectively, all two tailed.

Responses are: “very socially inappropriate” (--), “somewhat socially inappropriate” (-), “somewhat socially appropriate” (+), and “very socially appropriate” (++) . To construct the mean ratings, the responses were concerted to -1, -1/3, 1/3, and 1, respectively. Modal responses are shaded.

Table 3: Elicited norms (N(ak)) and Rank sum test for differences between within- and between-subject designs (“give”)

Action	Give, between-subject design (n=39)					Give, within-subject design (n119=)					Rank sum test (z)
	Mean	--	-	+	++	Mean	--	-	+	++	
"Give 0 kr"	-0,863	84,6%	12,8%	0%	2,6%	-0,854	83,2%	13,5%	1,7%	1,7%	0,463
"Give 250 kr"	-0,265	12,8%	64,1%	23,1%	0%	-0,158	1,3%	59,3%	27,1%	4,2%	4,209***
"Give 500 kr"	0,966	0%	2,6%	0%	97,4%	0,977	0%	0%	3,4%	96,6%	-0,227
"Give 750 kr"	0,404	5,3%	21,1%	31,6%	42,1%	0,589	2,5%	9,2%	35,8%	52,5%	0,674
"Give 1000 kr"	0,282	20,5%	10,26%	25,6%	43,6%	0,389	10,8%	18,3%	22,5%	48,3	0,294

*, **, ***, indicates significance at the 90%, 95%, and 99% level, respectively, all two tailed.

Responses are: “very socially inappropriate” (--), “somewhat socially inappropriate” (-), “somewhat socially appropriate” (+), and “very socially appropriate” (++) . To construct the mean ratings, the responses were concerted to -1, -1/3, 1/3, and 1, respectively. Modal responses are shaded.

4.3.2 “Take” and “give” framing

Result 2: *There are some minor, but no systematic effect of framing the action as “to take” or “to give”.*

In table 5 the results from the between-subject norm elicitation experiment are shown together with the results from Wilcoxon Rank-sum tests (Mann-Whitney tests). The test tests for any differences in evaluations between treatment-conditions, for given payoff-equivalent actions. The results indicate that there are no significant differences between treatment-conditions. Put differently; people’s evaluations are unaffected of whether the action is framed as “to take” to “to give”. However, the sample sizes of the experiment with the between-subject experiment are small (N=39). Thus, there might be some small effect, which the analysis lacks statistical power to prove.

For the within-subject designed norm eliciting experiment, the sample sizes are considerably larger (N=119). The results of the within-subject design experiment are reported in table 6, together with results from Wilcoxon signed-rank tests. The test result show no systematic framing effect of the treatment-condition.

However, regarding the within-designed version there are some statistical significant differences between the two treatment-conditions. For all the significantly different evaluations, the actions framed as “to take” are evaluated as less socially acceptable than when framed as “to give”. To “take 1000” is evaluated as less socially appropriate than to “give 0” (-2,004**), and to “take 500” is seen as less socially acceptable than to “give 500” (2,127**). Though significant, the descriptive statistics of table 4 show that the effects are small, e.g. the significant effect of “take 500” against “give 500” stems from a difference in mean evaluations (and standard deviations) of 0,933 (0,235) and 0,977 (0,121), respectively. Nevertheless, the statistical significant results point in the direction of it being seen as less socially appropriate to take money, than to give.

Table 5: Elicited norms (N(ak)) and Rank sum tests for differences between “take” and “give”, (between-subject design)

Final wealth	Give, between-subject design (n=39)					Take, between-subject design (n=39)					Rank sum test (z)	
	Action	Mean	--	-	+	++	Action	Mean	--	-		+
1000 kr, 0 kr	"Give 0 kr"	-0,863	84,6%	12,8%	0%	2,6%	"Take 1000kr"	-0,897	87,2%	10,3%	2,6%	0%
750 kr, 250 kr	"Give 250 kr"	-0,265	12,8%	64,1%	23,1%	0%	"Take 750kr"	-0,162	5,1%	64,1%	30,8%	0%
500 kr, 500 kr	"Give 500 kr"	0,966	0%	2,6%	0%	97,4%	"Take 500kr"	0,983	0%	0%	2,6%	97,4%
250 kr, 750 kr	"Give 750 kr"	0,404	5,3%	21,1%	31,6%	42,1%	"Take 250kr"	0,504	0%	15,4%	43,59%	41,0%
0 kr, 1000 kr	"Give 1000 kr"	0,282	20,5%	10,26%	25,6%	43,6%	"Take 0kr"	0,402	10,3%	18,0%	23,1%	48,7%

*, **, ***, indicates significance at the 90%, 95%, and 99% level, respectively, all two tailed.

Responses are: “very socially inappropriate” (--), “somewhat socially inappropriate” (-), “somewhat socially appropriate” (+), and “very socially appropriate” (++) . To construct the mean ratings, the responses were concerted to -1, -1/3, 1/3, and 1, respectively. Modal responses are shaded.

Table 6: Elicited norms (N(ak)) and Signed-rank tests for differences between “take” and “give”, (within-subject design)

Final wealth	Give, within-subject design (n=119)					Take, within-subject design (n=119)					Signed-rank test (z)	
	Action	Mean	--	-	+	++	Action	Mean	--	-		+
1000 kr, 0 kr	"Give 0 kr"	-0,854	83,2%	13,5%	1,7%	1,7%	"Take 1000kr"	-0,761	78,3%	13,3%	2,5%	5,8%
750 kr, 250 kr	"Give 250 kr"	-0,158	1,3%	59,3%	27,1%	4,2%	"Take 750kr"	-0,083	8,3%	52,5%	32,5%	6,7%
500 kr, 500 kr	"Give 500 kr"	0,977	0%	0%	3,4%	96,6%	"Take 500kr"	0,933	0%	1,7%	6,7%	91,7%
250 kr, 750 kr	"Give 750 kr"	0,589	2,5%	9,2%	35,8%	52,5%	"Take 250kr"	0,600	0,8%	11,7%	34,3%	53,3%
0 kr, 1000 kr	"Give 1000 kr"	0,389	10,8%	18,3%	22,5%	48,3%	"Take 0kr"	0,350	12,5%	22,5%	15,0%	50,0%

*, **, ***, indicates significance at the 90%, 95%, and 99% level, respectively, all two tailed.

Responses are: “very socially inappropriate” (--), “somewhat socially inappropriate” (-), “somewhat socially appropriate” (+), and “very socially appropriate” (++) . To construct the mean ratings, the responses were concerted to -1, -1/3, 1/3, and 1, respectively. Modal responses are shaded.

4.3.3 The shape of the norm profiles

Result 3: *There is an asymmetry in the norm profile, and it is stable across treatments*

Figure 2 illustrates the norm profiles of all three treatment-conditions i.e. the mean appropriateness evaluation of each hypothetical action of the decision maker. As the figure displays, the norm-profiles are very similar across treatment-conditions.

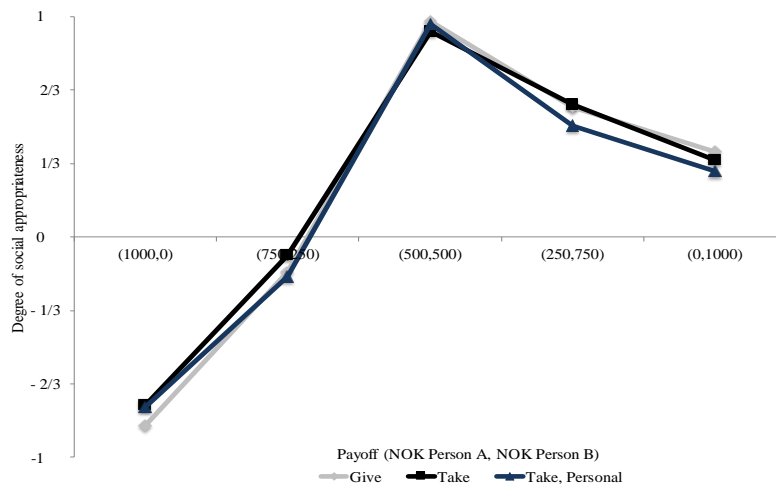


Figure 2: Norm-profiles "take" and "give", and evaluation-profile, "take, personal"

Figure 2 also reveals an asymmetry in the norm-profiles. As expected, the most socially appropriate action is an equal split, and thus the dominant social norm. When the decision maker allocates more than 50% to the recipient, the actions are evaluated as less socially appropriate, though still socially appropriate. However, when the decision maker allocates more than 50% to himself, the actions are always evaluated as socially inappropriate, on average. Thus, the norm profiles tells us that people care about more than purely the distribution.

Using the dominant social norm as a reference point for rightful endowments, the norm profiles tells us that the decision maker is free to make allocations which compromises "his half" of the common pool. However, he is not free to allocate "the recipient's half" if he wants his action to be judged as acceptable. If one is concerned with one's action being considered socially acceptable, this might put some constraints on one's behavior.

As allocating more than half to the recipient is considered less socially acceptable than an equal split, it is reasonable to believe that few will choose such an action. Even though such an action would still be considered socially acceptable, you could achieve both more money and a higher degree of acceptance with the action of an equal split.

4.3.4 The precision of the evaluations

Result 4: *The norm-profile of the “injustice domain” is more precise than the norm-profile of the “beneficence domain”, but only for the extremities of the distribution-equivalent actions.*

These results gives evidence to Smith`s theory of the moral rules of justice being more precise than the rules of beneficence.

To clarify; the domains are defined by the norm-profile. Whereas the actions that are considered socially unacceptable belongs to the “injustice domain”, socially acceptable actions belong to the “beneficence domain”.

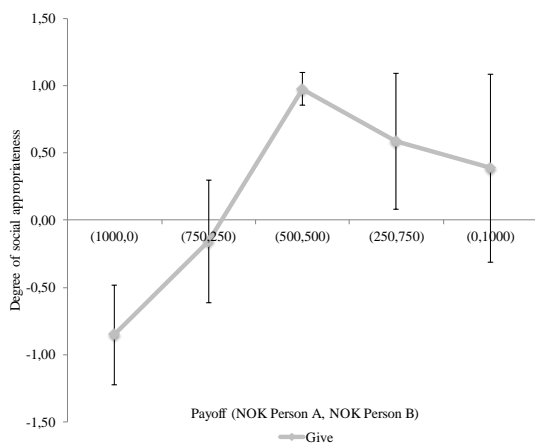


Figure 3: Norm-profile with standard deviations of the means, “Give”

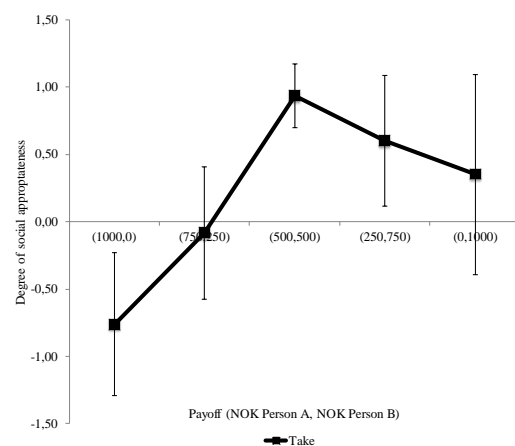


Figure 4: Norm-profile with standard deviations of the means, “Take”

Figure 3 and 4 show the norm-profile of the “Give” and “Take” treatment-conditions, respectively. The figures also display the standard deviations of the means. They are based on data from the within-experiment. However, the norm-profiles of the between-subject designed experiment show the same pattern (see Appendix F).

All norm-profiles follow the same pattern. Allocating half or more to the recipient belongs to the “beneficence domain”, and allocating less than half to the recipient are actions of the “injustice domain”. The standard deviations indicate that the social norms of the “beneficence domain” are quite vague, indicating a heterogeneity between individuals concerning what is the social norm. However, the norm-profiles also indicate that there is less variation in the evaluations of the “injustice domain”. Put differently: subjects seem to agree more about the evaluation of actions that are considered socially inappropriate than those considered appropriate.

To test whether the differences in precision between the “injustice”- and “beneficence-domain” are statistically significant, the variance in evaluations of distribution-equivalent actions are compared with Breusch-Pagan tests. The results are presented in Table 7.

Table 7: Breusch Pagan test for distribution-equivalent actions within a treatment-condition

Treatment-condition	(1000,0) & (0,1000)			(750,250) & (250, 750)		
	Chi2(1)	p-value	n	Chi2(1)	p-value	n
Give	37.76	0.000	239	1.22	0,270	238
Take	12.33	0.000	240	0.01	0.909	240
Take, personal	17.48	0.000	240	1.59	0.208	240

The Breusch Pagan test tests for heteroscedasticity in a linear regression model. The results obtained in table 7, are based on the baseline regressions of the distribution-equivalent actions of a treatment-condition (see Appendix H). The squared estimated residuals from the baseline regressions are then used in auxiliary regressions. In the auxiliary regressions, the squared estimated residuals are regressed on the independent variables, being the evaluations of the two distribution-equivalent actions. The null-hypothesis is one of homoscedasticity. The R^2 of the auxiliary regression used to calculate the LM-statistic, which under the null-hypothesis will approximately be a chi-squared statistic with one degree of freedom.

From the results presented in table 7, we can assume homoscedasticity for the evaluations of taking/giving nothing/everything. Even for a significance threshold 99 percentage level. From Figure 3, 4 and 6, we can conclude that the evaluations in the “justice domain” which has the lower variance. This result is robust across treatment-conditions. The same results are obtained in the between-subject designed experiment (see Appendix G).

However, when testing the variance of evaluations of more equal distribution-equivalent ((250,750) and (750,250)), we cannot reject the null hypothesis of homoscedasticity, and thus not say that the variances are statistically significant. Thus, we can only draw the conclusion that the evaluations are more precise in the “injustice domain”, but only for the extremities of the distribution-equivalent actions.

4.3.5 Putting yourself in the position of the decision maker

Result 5: *One`s own assessment of one`s hypothetical actions follow the norm-profile, but not perfectly.*

The results of this subchapter gives evidence to the claim made in the end of the subtitle added to the 4th addition of TMS : “An essay towards an Analysis of the Principles by which Men naturally judge concerning the Conduct and Character, *first of their Neighbors, and afterwards of themselves.*”⁹

As figure 5 shows, the evaluations of hypothetical personal behavior follow the norm profile. However, they do not follow each other perfectly. As the Wilcoxon Signed-rank tests presented in table 8 show, the evaluations are significantly different for the middle ranged actions (“take 750”, “take 500”, and “take 250”). However, the evaluation of an equal split is only statistically significant at the 90%-level.

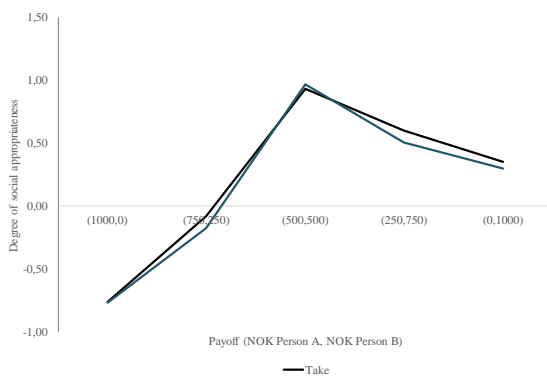


Figure 5: Norm profile of “take”, and “take-personal” evaluations

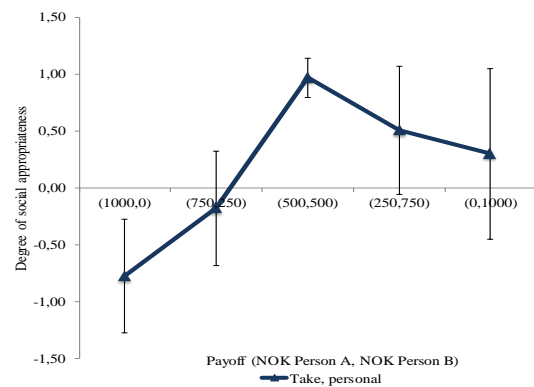


Figure 6: Evaluations of “take personal”, with standard deviations

For the two other statistically significantly different evaluations, the subjects evaluate their own hypothetical actions as less socially appropriate than if somebody else conducted them. One might interpret this as subjects being stricter with themselves. However, that is not necessarily the case. There were no monetary incentive for this task, and the subject had nothing to gain by being truthful. However, Veselý (2015) suggests that people provide virtually identical responses with or without monetary incentives. Moreover, though the differences are significant, they are nevertheless small. In addition, the evaluations follow the same pattern as the norm-profile.

⁹ My alterations to the quotation

Table 8 : Elicited norms (N(ak)) and Rank sum tests for differences between “take” and “take, personal”, (between-subject design)

Final wealth	Action	Take (n=119)				Take, personal (n=120)				Signed-rank test (z)		
		Mean	--	-	+	++	Mean	--	-		+	++
1000 kr, 0 kr	"Take 1000kr"	-0,761	78,3%	13,3%	2,5%	5,8%	-0,772	79,7%	10,8%	6,7%	3,3%	0,455
750 kr, 250 kr	"Take 750kr"	-0,083	8,3%	52,5%	32,5%	6,7%	-0,178	13,3%	55,8%	25,0%	5,8%	2,329**
500 kr, 500 kr	"Take 500kr"	0,933	0%	1,7%	6,7%	91,7%	0,967	0%	0,8%	3,3%	95,8%	-1,661
250 kr, 750 kr	"Take 250kr"	0,600	0,8%	11,7%	34,3%	53,3%	0,506	2,5%	18,3%	30,0%	49,2%	2,557**
0 kr, 1000 kr	"Take 0kr"	0,350	12,5%	22,5%	15,0%	50,0%	0,300	15,0%	20,0%	20,0%	45,0%	1,225

*, **, ***, indicates significance at the 90%, 95%, and 99% level, respectively, all two tailed.

Responses are: “very socially inappropriate” (--), “somewhat socially inappropriate” (-), “somewhat socially appropriate” (+), and “very socially appropriate” (++). To construct the mean ratings, the responses were converted to -1, -1/3, 1/3, and 1, respectively. Modal responses are shaded.

To study whether the moral judgement of one`s own hypothetical behavior follow the norm-profile, the variance of the evaluations is an important factor. Except for the evaluation of an equal split, figure 6 relative to figure 4 indicates that the standard deviations from the mean should be much the same.

Table 9: Breusch-Pagan test for payoff-equivalent actions between the “take” and “take, personal” treatment-conditions

Payoff	Action	Chi2(1)	p-value
(1000,0)	"take 1000"	0.44	0.509
(750,250)	"take 750"	0.08	0.781
(500,500)	"take 500"	11.95	0.001
(250,750)	" take 250 "	2.71	0.100
(0,1000)	"take 0"	0.01	0.918

Results from a Breuch-Pagan test¹⁰, shown in table 9, gives strong evidence of a significant difference of evaluations of an equal split between “take” and “take personal”. Nevertheless, for all the other payoff-equivalent actions, there is no significant results for a significant threshold of 5%.

If the measured evaluation in fact is representative of a valid social norm, then one`s evaluation of the morality of one`s own behavior should correspond to the evaluation of others behavior in an identical situation. Finding that the evaluations of one`s own hypothetical actions follow the norm-profile, gives evidence of having elicited a valid social norm. Thus, this evidence suggests that the norm elicitation method is valid.

¹⁰ The baseline regressions of the Breusch-Pagan test are found in Appendix I.

4.3.6 Evaluations across treatment-conditions at an individual level

Result 6: *About 80 percent evaluate the payoff-equivalent actions equally across treatment-conditions, but only about 16 percent evaluate distribution-equivalent actions equally.*

A within-subject design gives us the possibility to study evaluations across treatment-conditions at the level of the individual. Table 10 gives the descriptive statistics on how large a percentage of the participants evaluated payoff-equivalent situations equally, or to which degree they did not.

Table 10 shows that about 80 percent of the individuals evaluate the payoff-equivalent situations equally across treatments. It also shows the same pattern in percentages across treatment-conditions. The highest percentage of equal evaluations of the action of an equal split, and the lowest is the action of the decision maker allocating 750 NOK to himself.

Table 10: Evaluations at an individual level, between treatment-conditions

Pay-off	Take and Give (percent)				Take and Take-Personal (percent)			
	Equal	+1/-1	+2/-2	+3/-3	Equal	+1/-1	+2/-2	+3/-3
(1000,0)	82.4	13.4	2.5	1.7	86.7	8.3	5.0	
(750,250)	61.0	35.5	3.4		63.3	32.5	4.2	
(500,500)	93.2	5.1	1.7		92.5	6.7	0.8	
(250,750)	77.5	18.3	4.2		75.0	18.3	5.8	0.8
(0,1000)	71.7	20.8	4.2	3.3	75.8	18.3	1.7	4.2
Average	80.3	18.6	3.2	1.0	78.7	16.6	3.5	1.0

However, when it comes to the distribution-equivalent actions, people tend not to evaluate them equally. Table 11 gives the percentages of the participants that evaluated the distributional-equivalent actions equally, and the percentages of those who did not. On average, across treatment-conditions, only 14,5 percent evaluated the distributional-equivalent actions of allocating everything/ nothing to the recipient equally. Furthermore, 17,5 percent evaluated allocating 250 NOK/ 750 NOK equally across the treatment-conditions. Hence, only 16,2 percent evaluated distribution-equivalent actions equally across treatment-conditions.

Table 11: Evaluations at an individual level, of distribution-equivalent actions (percentage)

Condition	Evaluations of (1000,0) vs. (0,1000)				Evaluations of (750,250) vs. (250,750)			
	Equal	+1/-1	+2/-2	+3/-3	Equal	+1/-1	+2/-2	+3/-3
Give	12.6	21.9	21.9	44.6	17.8	35.6	42.3	4.2
Take	13.3	21.6	18.3	46.7	17.5	38.3	38.3	5.8
Take, personal	17.5	17.5	26.7	38.3	18.3	38.5	35.8	7.5
Average	14.5	20.3	22.3	43.2	17.9	37.5	38.8	5.8

4.3.7 Predictions based on elicited social norms

Having tested the hypotheses based on Adam Smith`s theories of moral rules of conduct, it is time to make some predictions for actual behavior. Based solely on the already presented results, i.e. the elicited norm profiles and their precision, the following predictions are made regarding behavior in the dictator game experiments:

Prediction I: *The subjects` behavior will in large be unaffected by whether the action is framed as “to take” or “to give”.*

Prediction II: *Most dictators will chose to split the resource equally between himself and “Person B”.*

Prediction III: *As it is more socially appropriate with an equal split than to give more than half to the recipient, almost no one will chose to allocate more than 50% to the recipient.*

4.3.8 Balanced samples?

If the characteristics of the subjects involved in the norm eliciting tasks are different from those whose behavior is observed, the explanatory power of the elicited norms may be reduced (D’Adda et al. 2016). Thus, it is important for the samples to be balanced across experiments.

Table 12 shows a summarization of the personal characteristics of the participants of the dictator experiments and the norm elicitation experiment with a within-subject design.

Table 12: Sample Characteristics

	Give	Take	Give and take, total	Norm eliciting
Man	0,293 (0,46)	0,317 (0,47)	0,299 (0,46)	0,400 (0,49)
Education	3,448 (0,99)	3,448 (0,99)	3,44 (0,99)	3,525 (0,86)
Experience	0,895 (1,08)	0,983 (1,05)	0,948 (1,06)	1,125 (1,15)
n	59	57	116	120

Note: The table displays the mean (standard deviation) for the different personal characteristics of the participants in the dictator experiment with the treatment groups ‘Give’ and ‘Take’, and the norm eliciting experiment. The variable ‘Man’ indicated the sex and is a dummy-variable, which takes the value ‘1’ for a man. ‘Education’ is an ordinal variable where 1= 1st semester, 2= 2nd semester, 3= 3rd semester, and 4= more than three semesters. ‘Experience’ is also an ordinal variable, and give information regarding the participant’s experience with experiments. For ‘Experience’ 0= no experience, 1= once, 2= twice, and 3= three times or more.

For the dictator experiment, there are only minor deviations between the treatment groups. The samples are thus balanced with respect to all the sample characteristics. However, the samples also need to be balance across experiments. Compared to the norm elicitation experiment, there are a higher share of women to men in the dictator experiments. On average, the participants in the norm eliciting experiment have a slightly higher level of education and are somewhat more experienced with experiments. Nevertheless, the characteristics of the samples are mostly balanced. Thus, with respect to these sample characteristics, there should not be any loss of explanatory power of the elicited social norms.

4.3.9 The dictator games –testing the predictions

Result 7: *The elicited norm-profiles predicts observed behavior*

To answer the predictions based on the norm elicitation experiment, the results from the two dictator experiments are used.

Prediction 1: *The subjects` behavior will in large be unaffected by whether the action is framed as “to take” or “to give”.*

To provide an answer to the first prediction derived from the norm eliciting experiment, I will first present some descriptive statistics. Figure 7 shows the means and the standard errors of the means of the respective treatment-condition. The figure gives strong evidence of there being no difference between two. This, both due to the small difference in means (341,7 NOK for “Give” and 348,2 NOK for “Take”) and due to the standard errors overlapping almost entirely. Additionally, when tested with a Wilcoxon rank sum test, the means of the dictator experiments turned out not statistically significantly different (z-value of -0,039, and p-value of 0,969).

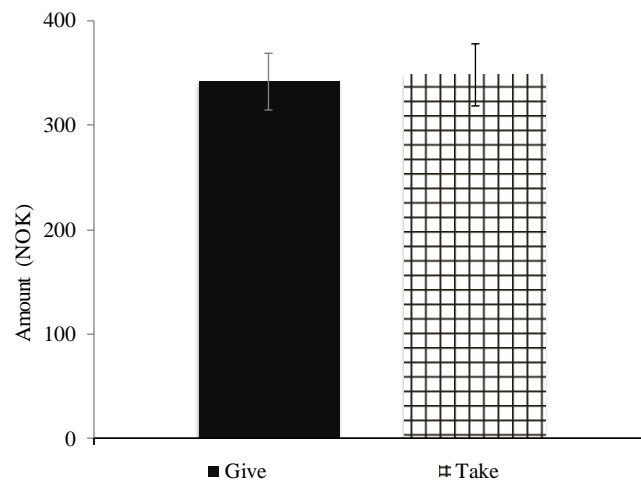


Figure 7 : Means and standard errors of the means

Even though Figure 7 and the Wilcoxon rank sum test gives strong evidence of the framing of the action having no effect on behavior, it is worth studying the distributions of amounts allocated to “Participant B”. Figure 8 shows the distributions of amounts distributed to “Person B” by “Person A” in both treatment conditions. The figure shows two quite similar distributions, and suggests that there are no major differences in behavior across treatments.

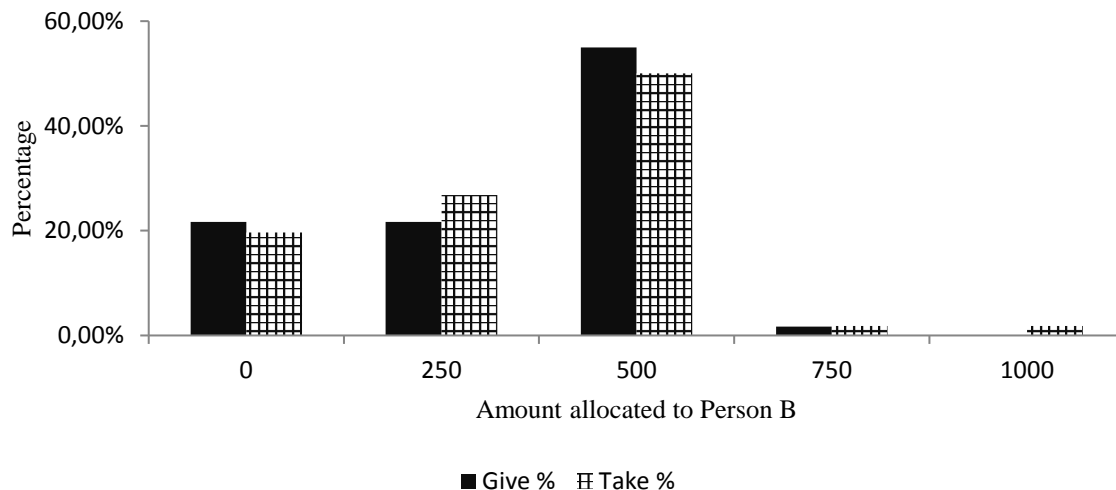


Figure 8: Distribution of amounts allocated to Person B by Person A in the Dictator Experiment

Prediction II: *Most dictators chose to split the resource equally between himself and “Person B”.*

Figure 8 shows that the most common distribution made by the dictator is an equal split of the common resource. Respectively, the action is chosen by 55,0 percent and 50,0 percent in the “Give”- and “Take”-treatment. This is thus in line with the prediction based on the norm elicitation experiment, where dividing the resource equally was evaluated as the most socially appropriate action.

Prediction III: *As it is more socially appropriate with an equal split than to give more than half to the recipient, almost no one will chose to allocate more than 50% to the recipient.*

The distributions of figure 8 also gives evidence of the third prediction. The distributions are heavily skewed to the left as almost no one chose to give more than 500 NOK to the recipient (3,6 percent (“Take”) and 1,7 percent (“Give”)).

However, if one bluntly base predictions on the elicited norms, few would break the norm as it is considered socially inappropriate. Figure 8 show that this is not the case. In both treatments, a relatively large percentage allocate less than half to the recipient (43,4 percentage in the “give” treatment, and 46,4 percentage in the “take” treatment). This cannot be explained by social norms alone. Rather, it can be seen as a defense of a model modeling behavior as a tradeoff between compliance to a social norm and monetary payments.

Chapter 5: Concluding remarks

Finding that it is possible to conduct the norm elicitation method of Krupka and Weber (2013) with a within-subject design, opens up new possibilities for applications of the method. Also contributing to the validity of the results, is the fact that subject's evaluations of their own hypothetical behavior follow the norm-profile. Altogether, the results suggest that the method gives strong enough incentives for people to reveal the social norm.

The dominant social norm is an equal split, and about half of the participants comply. This suggests that although the decision maker is granted full allocation rights, there seem to be some social pressure in form of a social norm linked to the available actions.

Though some minor framing effects, people's evaluations are most affected by what the action entails. The experiment gives evidence of an asymmetry in the norm-profiles and of people agreeing more about what is socially inappropriate than what is appropriate. In other words, the social norms of the "injustice-domain" is more precise than the norms of the "beneficence-domain". Nevertheless, data from the dictator experiments show that almost half of the participants violates the norm by allocating more than 50 percent to themselves. Such behavior cannot be explained by social norms alone. Rather it supports Krupka and Weber's (2013) modeling of behavior as a trade-off between compliance to social norms and monetary payoff. However, as the social norms of the "beneficence domain" are vague due to a heterogeneity in individual's beliefs, it might be an idea not to operate with a common social norm in this domain. Rather, for the "beneficence domain", one might suggest to use each individual's beliefs about the social norm (denoted as $N_i(a_k)$), making for individual utility functions:

$$u_i(a_k) = V(\pi(a_k)) + \gamma N_i(a_k) \quad (2)$$

For future research, it would be interesting to make the dictator experiment more social (e.g. remove the dictator's anonymity) to study whether people behave more in line with the social norm. To study the impact of property rights on social norms, I conducted an experiment where I varied the property rights between a standard and a "bully" dictator game. The experiment was conducted by the Norwegian Citizen Panel. However, the results were delayed, and I was therefore unable to fit it into the thesis. A robustness check for the results of this thesis could be to test if it matter whether it is "Person A" or "Person B" who is the decision maker.

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Appendix A: Instructions, dictator experiment

[Norwegian]

Deltaker _____

Vennligst fyll ut:

Kjønn:

Kvinne _____ Mann _____

Hvor mange semestre har du studert på høyskole eller universitet?

Første semester _____ Andre semester _____

Tredje semester _____ Flere enn tre semestre _____

Har du deltatt i lignende eksperiment før?

Nei _____ Ja, 1 gang _____ Ja, 2 ganger _____ Ja, 3 eller flere _____

På neste side vil dere bli presentert for to spørsmål hvor dere i begge blir bedt om å ta en avgjørelse. Vennligst svar på begge spørsmålene. Når eksperimentet er over, vil 2 personer i rommet trekkes ut til å få realisert sitt valg enten i spørsmål 1 eller spørsmål 2. Valget du tar er helt anonymt, og vil ikke ha innvirkning på sannsynligheten for å bli trukket ut til å motta penger.

«Diktator, gi»

Person A og person B trekkes tilfeldig ut. Av en felles pott på 1000 kroner, kan person A bestemme hvor mye han eller hun skal gi av pengene i potten. Det person A gir, mottar person B, og det resterende beløpet beholder person A selv.

Dersom du trekkes ut til å være person A, må du velge om, og i så fall hvor mye, du skal gi. Du kan velge mellom å gi ingenting (0 kroner), 250 kroner, 500 kroner, 750 kroner eller alt (1000 kroner).

Jeg velger å gi:	Ditt svar:
Ingenting (1000 kr til deg, 0 kr til person B)	
250 kr (750 kr til deg, 250 kr til person B)	
500 kr (500 kr til deg, 500 kr til person B)	
750 kr (250 kr til deg, 750 kr til person B)	
Alt (0 kr til deg, 1000 kr til person B)	

“Diktator, ta”

Person A og person B trekkes tilfeldig ut. Av en felles pott på 1000 kroner, kan person A bestemme hvor mye han eller hun skal ta fra pengene i potten. Det person A tar, beholder person A selv, og det resterende beløpet mottar person B

Dersom du trekkes ut til å være person A, må du velge om, og i så fall hvor mye, du skal ta. Du kan velge mellom å ta ingenting (0 kroner), 250 kroner, 500 kroner, 750 kroner eller alt (1000 kroner).

Jeg velger å ta:	Ditt svar
Ingenting (0 kr til deg, 1000 kr til person B)	
250 kr (250 kr til deg, 750 kr til person B)	
500 kr (500 kr til deg, 500 kr til person B)	
750 kr (750 kr til deg, 250 kr til person B)	
Alt (1000 kr til deg, 0 kr til person B)	

Translated version:

Participant: _____

Please fill out:

Sex:

Female _____ Male _____

How many semesters have you studied at a university or a collage?

First semester _____ Second semester _____

Third semester _____ More than three semesters _____

Have you previously participated in an experiment?

No _____ Yes, once _____ Yes, twice _____ Yes, three or more _____

On the next page, you will be presented for two questions where you in both will be asked to make a decision. Please answer both questions. When the experiment is over, two participants in the lab will be randomly selected to get one of their choices realized. The choices you make will be anonymous, and will not affect the probability to receive payment.

“Dictator, give”

Person A and Person B is randomly selected. Of a common pool of 1000 NOK, Person A is able to decide how much of this money he or she should give. What Person A gives is received by Person B, and the remaining amount is kept by Person A.

If you are selected to be Person A, you have to make a choice on whether to give, and in that case how much you want to give. You can choose between giving nothing (0 NOK), 250 NOK, 500 NOK or everything (1000 NOK).

I choose to give:	Your answer:
Nothing (1000 NOK for you, 0 NOK to Person B)	
250 NOK (750 NOK for you, 250 NOK to Person B)	
500 NOK (500 NOK for you, 500 NOK to Person B)	
750 NOK (250 NOK for you, 750 NOK to Person B)	
Everything (0 NOK for you, 1000 NOK to Person B)	

“Dictator, take”

Person A and Person B is randomly selected. Of a common pool of 1000 NOK, Person A is able to decide how much of this money he or she should take. What Person A takes is kept by Person A, and the remaining amount is received by Person B.

If you are selected to be Person A, you have to make a choice on whether to take, and in that case how much you want to take. You can choose between taking nothing (0 NOK), 250 NOK, 500 NOK or everything (1000 NOK).

I choose to take:	Your answer:
Nothing (0 NOK for you, 1000 NOK to Person B)	
250 NOK (250 NOK for you, 750 NOK to Person B)	
500 NOK (500 NOK for you, 500 NOK to Person B)	
750 NOK (750 NOK for you, 250 NOK to Person B)	
Everything (1000 NOK for you, 0 NOK to Person B)	

Appendix B: Instructions, norm elicitation experiment

[Side 1] Deltaker _____

Kjønn:

Kvinne _____ Mann _____

Hvor mange semestre har du studert på høyskole eller universitet?

Første semester _____ Andre semester _____

Tredje semester _____ Flere enn tre semestre _____

Har du deltatt i lignende eksperiment før?

Nei _____ Ja, 1 gang _____ Ja, 2 ganger _____ Ja, 3 eller flere _____

[Side 2] Instruksjoner

Instruksjon

I dette eksperimentet vil du bli presentert for ulike hypotetiske situasjoner der «Person A» står overfor et valg. Situasjonen vil bli presentert med en beskrivelse av valget personen står overfor, samt mulige handlinger.

Etter at du har lest beskrivelsen av situasjonen, vil du bli bedt om å evaluere hvor sosialt akseptabel og i samsvar med god moral og passende oppførsel, hver av de ulike handlingene er. Handlingene skal evalueres på en skala fra «Veldig sosialt uakseptabelt» til «Veldig sosialt akseptabelt.» Med sosialt akseptabelt mener vi oppførsel som folk flest vil være enig om at er «rett» eller «etisk». En annen måte å forstå det på, er at dersom en person velger en sosialt uakseptabel handling, vil andre kunne bli opprørt over personens oppførsel. For å gi en idé om hva du skal gjøre, følger det under et eksempel.

Eksempel

Person A er på en kafé nær universitetet. Her oppdager Person A at noen har glemt lommeboken sin på et av bordene. Person A må bestemme seg for hva som skal gjøres med lommeboken. Det er fire mulige handlinger: Ta lommeboken, spørre andre i nærheten om de eier lommeboken, la lommeboken ligge der den er eller gi lommeboken til personalet. Vennligst evaluer hver av de ulike handlingene, marker dine svar med et kryss. Eksempel:

Handlinger	Veldig sosialt uakseptabelt	Noe sosialt uakseptabelt	Noe sosialt akseptabelt	Veldig sosialt akseptabelt
Ta lommeboken	X			
Spørre andre i nærheten				X
La lommeboken ligge		X		
Gi lommeboken til personalet				X

Etter eksperimentet vil det trekkes ut en tilfeldig handling. Av de deltakerne som har evaluert denne handlingen likt som flesteparten av de andre deltakerne, trekkes 3 deltakere ut og får utbetalt 500 kr. Dersom du har evaluert handlingen ulikt flesteparten av de andre deltakerne, er du ikke med i trekningen om 500 kr.

[Side 3] Situasjon 1

Anta at person A og person B er tilfeldig uttrukket, og at av en felles pott på 1000 kroner, kan person A bestemme hvor mye han eller hun skal gi av pengene i potten. Det person A gir, mottar person B, og det resterende beløpet beholder person A selv. Person A kan velge mellom å gi ingenting (0 kroner), 250 kroner, 500 kroner, 750 kroner eller alt (1000 kroner).

Tabellen under viser de ulike valgene person A kan foreta seg. Vennligst indiker hvor sosialt akseptabel hver av de fem handlingene er. Husk at du er med i trekningen om 500 kr dersom din evaluering av en tilfeldig trukket handling, er lik evalueringen til flertallet av de andre deltakerne. Marker dine svar med kryss.

Person A sitt valg	Veldig sosialt uakseptabelt	Noe sosialt uakseptabelt	Noe sosialt akseptabelt	Veldig sosialt akseptabelt
Gi ingenting (1000 kr til A, 0 kr til B)				
Gi 250 kroner (750 kr til A, 250 kr til B)				
Gi 500 kroner (500 kr til A, 500 kr til B)				
Gi 750 kroner (250 kr til A, 750 kr til B)				
Gi alt (0 kr til A, 1000 kr til B)				

[Side 5] Situasjon 3

Anta at person A og person B er tilfeldig uttrukket, og at av en felles pott på 1000 kroner, kan person A bestemme hvor mye han eller hun skal ta fra pengene i potten. Det person A tar, beholder person A selv, og det resterende beløpet mottar person B. Person A kan velge mellom å ta ingenting (0 kroner), 250 kroner, 500 kroner, 750 kroner eller alt (1000 kroner).

Tabellen under viser de ulike valgene person A kan foreta seg. Vennligst indiker hvor sosialt akseptabel hver av de fem handlingene er. Husk at du er med i trekningen om 500kr dersom din evaluering av en tilfeldig trukket handling, er lik evalueringen til flertallet av de andre deltakerne. Marker dine svar med kryss.

Person A sitt valg	Veldig sosialt uakseptabelt	Noe sosialt uakseptabelt	Noe sosialt akseptabelt	Veldig sosialt akseptabelt
Ta ingenting (0 kr til A, 1000 kr til B)				
Ta 250 kroner (250 kr til A, 750 kr til B)				
Ta 500 kroner (500 kr til A, 500 kr til B)				
Ta 750 kroner (750 kr til A, 250 kr til B)				
Ta alt (1000 kr til A, 0 kr til B)				

[Side 6] Situasjon 5

Anta at du og en annen person i rommet er tilfeldig uttrukket, og at av en felles pott på 1000 kroner kan du bestemme hvor mye du skal ta fra pengene i potten. Det du tar beholder du selv, og det resterende beløpet mottar den andre deltakeren. Du kan velge mellom å ta ingenting (0 kroner), 250 kroner, 500 kroner, 750 kroner eller alt (1000 kroner).

Tabellen under viser de ulike valgene du kunne ha foretatt deg. Vennligst indiker hvor sosialt akseptabelt du hadde syns hver av de fem handlingene hadde vært dersom du selv hadde foretatt handlingen. Marker dine svar med et kryss.

Ditt valg	Veldig sosialt uakseptabelt	Noe sosialt uakseptabelt	Noe sosialt akseptabelt	Veldig sosialt akseptabelt
Ta ingenting (0 kr til deg, 1000 kr til den andre)				
Ta 250 kr (250 kr til deg, 750 kr til den andre)				
Ta 500 kr (500 kr til deg, 500 kr til den andre)				
Ta 750 kroner (750 kr til deg, 250 kr til den andre)				
Ta alt (1000 kr til deg, 0 til den andre)				

Translated version

[Page 1]

Participant: _____

Please fill out:

Sex:

Female _____ Male _____

How many semesters have you studied at a university or a collage?

First semester _____ Second semester _____

Third semester _____ More than three semesters _____

Have you previously participated in an experiment?

No _____ Yes, once _____ Yes, twice _____ Yes, three or more _____

[Page 2] Instructions

For this experiment, you will be presented for different hypothetical situations where “Person A” faces different choices. The situations will be presented with a description of the choice “Person A” faces, as well as with possible actions.

After having read the description of the situation, you will be asked to evaluate how socially acceptable and in compliance with good morals and appropriate behavior, each of the

different actions are. The actions are to be evaluate on a scale from “Very socially inappropriate” to “Very socially appropriate”. With socially appropriate, we mean behavior which most people would agree to be “correct” or “ethical” behavior. Another way of understanding it is, if the person chooses a socially unacceptable action, others will get upset over the person`s behavior. To get an idea of what you are asked to do, you are given an example below.

Example

Person A is at a café close to the university. Person A notices that someone have left their wallet on one of the tables. Person A has to decide what to do with the wallet. There are four possible actions: Take the wallet, ask someone close by is it is their wallet, let the wallet be, or to give the wallet to the personnel.

Please evaluate each of the different actions, and mark your answers with an X. Exemplified:

Actions	Very socially inappropriate	Somewhat socially inappropriate	Somewhat socially appropriate	Very socially appropriate
Take the wallet	X			
Ask someone close by				X
Leave the wallet		X		
Give the wallet to the personnel				X

After the experiment, one action will be randomly selected. Of the participants who have evaluated this action in the same way as most of the participants have done, three will be randomly selected to get paid an additional 500 NOK. If you have your evaluation differs from the majority of the other participants, you will not be in the running for the 500 NOK.

[Page 3] Situation 1

Suppose that Person A and Person B are randomly selected, and that from a commonly owned pool of 1000 NOK, Person A is able to decide how much he or she is to give of the money. What Person A gives, Person B receives, and the remaining amount is kept by Person A. Person A can choose between giving nothing (0 NOK), 250 NOK, 500 NOK, 750 NOK, or everything (1000 NOK).

The table below shows the different choices available to Person A. Please indicate how socially appropriate you find each of the five different actions. Remember that you are in the running for 500 NOK if your evaluation of the randomly selected action, is in equal to the evaluations of the majority of the other participants. Mark you answers with an X.

The choice of Person A	Very socially inappropriate	Somewhat socially inappropriate	Somewhat socially appropriate	Very socially appropriate
Give nothing (1000 NOK to A, 0 NOK to B)				
Give 250 NOK (750 NOK to A, 250 NOK to B)				
Give 500 NOK (500 NOK to A, 500 NOK to B)				
Give 750 NOK (250 NOK to A, 750 NOK to B)				
Give everything (0 NOK to A, 1000 NOK to B)				

[Page 5] Situation 3

Suppose that Person A and Person B are randomly selected, and that from a commonly owned pool of 1000 NOK, Person A is able to decide how much he or she is to take of the money. What Person A take, Person A keeps, and the remaining amount is received by Person B. Person A can choose between taking nothing (0 NOK), 250 NOK, 500 NOK, 750 NOK, or everything (1000 NOK).

The table below shows the different choices available to Person A. Please indicate how socially appropriate you find each of the five different actions. Remember that you are in the running for 500 NOK if your evaluation of the randomly selected action, is in equal to the evaluations of the majority of the other participants. Mark you answers with an X.

The choice of Person A	Very socially inappropriate	Somewhat socially inappropriate	Somewhat socially appropriate	Very socially appropriate
Take nothing (0 NOK to A, 1000 NOK to B)				
Take 250 NOK (250 NOK to A, 750 NOK to B)				
Take 500 NOK (500 NOK to A, 500 NOK to B)				
Take 750 NOK (750 NOK to A, 250 NOK to B)				
Take everything (1000 NOK to A, 0 NOK to B)				

[Page 6] Situation 5

Suppose you and another person in the room is randomly selected, and that from a common pool of 1000 NOK you can decide how much of the money to take. What you take, you keep, and the remaining amount is received by the other person. You can choose between taking nothing (0 NOK), 250 NOK, 500 NOK, 750 NOK, or everything (1000 NOK).

The table below shows the different actions available to you. Please indicate how socially appropriate you would find each of the five different actions, if you were the one who had undertaken the action. Mark your answers with an X.

Your choice	Very socially inappropriate	Somewhat socially inappropriate	Somewhat socially appropriate	Very socially appropriate
Take nothing (0 NOK to you, 1000 NOK to B)				
Take 250 NOK (250 NOK to you, 750 NOK to B)				
Take 500 NOK (500 NOK to you, 500 NOK to B)				

Take 750 NOK (750 NOK to you, 250 NOK to B)				
Take everything (1000 NOK to you, 0 NOK to B)				

Appendix C: Invitation e-mail, DIGSSCORE experiments

Norwegian:

Hei

Du er invitert til å delta i et eksperiment tirsdag 28.02.17. Du vil motta 50 kroner for oppmøte, og eksperimentet er finansiert av Universitetet i Bergen.

I tillegg til dette kan du tjene ytterligere penger. Disse pengene utbetales til deg når eksperimentet er over. Eksperimentet utføres anonymt, og det er frivillig å delta. Det kreves ingen forkunnskaper.

Eksperimentet varer omtrent 15 minutter, og vil holdes på Medborgerlaben i Sofie Lindstrøms hus (Rosenbergsgaten 35) i andre etasje.

Du kan melde deg på ved å logge på din profil her: <https://medborgerlab.app.uib.no/>

Translated version:

Hi,

You are hereby invited to participate in an experiment Tuesday 28.02.17. You will receive 50 NOK as a show up fee, and the experiment is financed by the University of Bergen.

In addition, you will be given the opportunity to make an additional sum of money. You will be paid the earned sum of money after the experiment. You will be anonymous, and participation voluntarily. No previous knowledge is needed.

The experiment will last roughly 15 minutes, and take place at the Citizen Lab of Sofie Lindstrøms hus (Rosenbergsgaten 35) at the second floor.

To register, please log on to your private profile at: <https://medborgerlab.app.uib.no/>

Appendix D: Reminding email, DIGGSCORE experiments

Norwegian:

Send x

To
Selected users

Subject
Påminnelse om invitasjon

Text
Text templates ▾

God morgen

Dette er en påminnelse om at du er invitert til et eksperiment i morgen, tirsdag 28.02.17.
Dersom du skulle ønske å delta, vennligst gå inn på <https://medborgerlab.app.uib.no/> for å velge et passende tidspunkt.

Ved spørsmål, kontakt smi100@student.uib.no

Translated version:

Subject: Reminder of invitation

Text:

Good morning

This is a reminder concerning you being invited to an experiment tomorrow, Tuesday 28.02.17.

If you wish to participate, please go to <https://medborgerlab.app.uib.no/> to choose an appropriate time.

For questions, contact smi100.at.student.uib.no

Appendix E: spoken instruction, between-subject experiment

Norwegian:

Hei

Vi er to masterstudenter fra Universitetet i Bergen, som er her for å gjennomføre et kort økonomisk eksperiment i pausen. Eksperimentet er finansiert av Institutt for Økonomi ved UIB og vil ta rundt 5 minutter. Det er muligheter for å vinne ekte penger basert på svarene man gir, og det er frivillig å delta.

Litt praktisk informasjon før vi begynner.

- Dere får utdelt et ark med instruksjoner på fremsiden og et spørsmål på baksiden. Vennligst les instruksjonene nøye
- Ta vare på den gule post-it lappen med deltakernummer på, dersom du vinner penger må du vise denne
- Vennligst ikke snakk med hverandre under eksperimentet
- Dere vil få 4 minutter til å gjennomføre eksperimentet, vi gir beskjed når det er 1 minutt igjen
- Dersom noen blir ferdig før, vennligst bli sittende å vente til alle er ferdig.
- Ved spørsmål, rekk opp en hånd

Da begynner vi å dele ut arkene.

Nå kan dere starte

Translated version:

Hi,

We are two Master students from the University of Bergen, who are here to do a short economic experiment during the break. The experiment is financed by the Faculty of Economics at UiB, and will last about five minutes. You will have the opportunity of making real earning, and participation is voluntary.

A bit of practical information before we start.

-You will each be handed a paper with instructions at the front, and a question on the back. Please read the instructions carefully.

-Please take care to keep the yellow post-it glued on the front of your paper. If you are to win money, you'll need it to identify yourself.

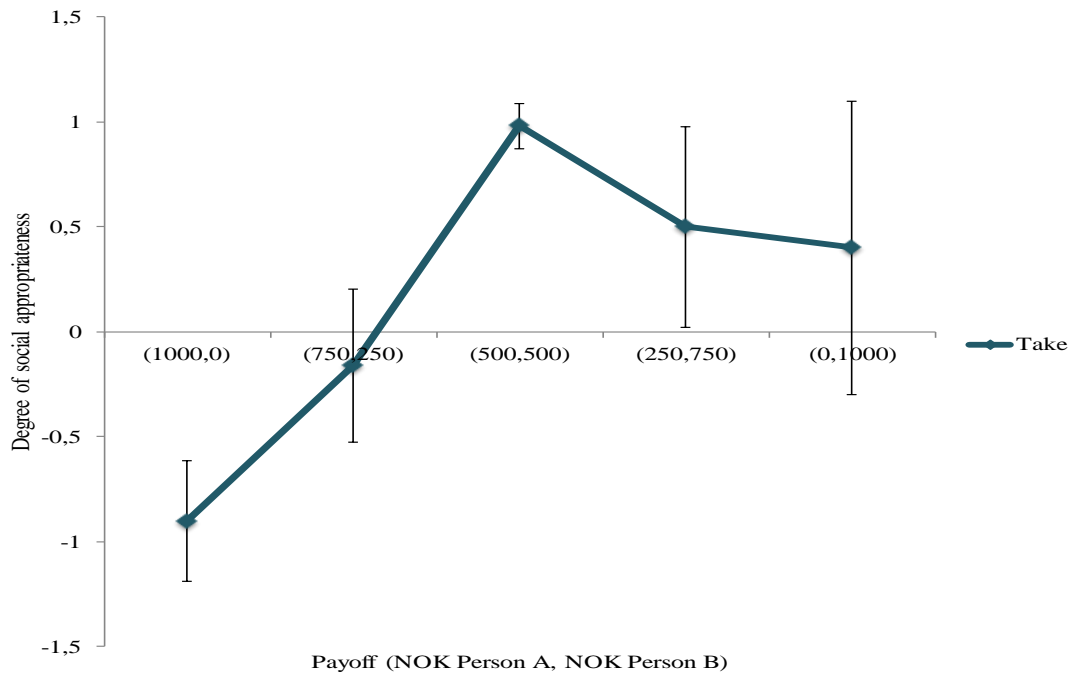
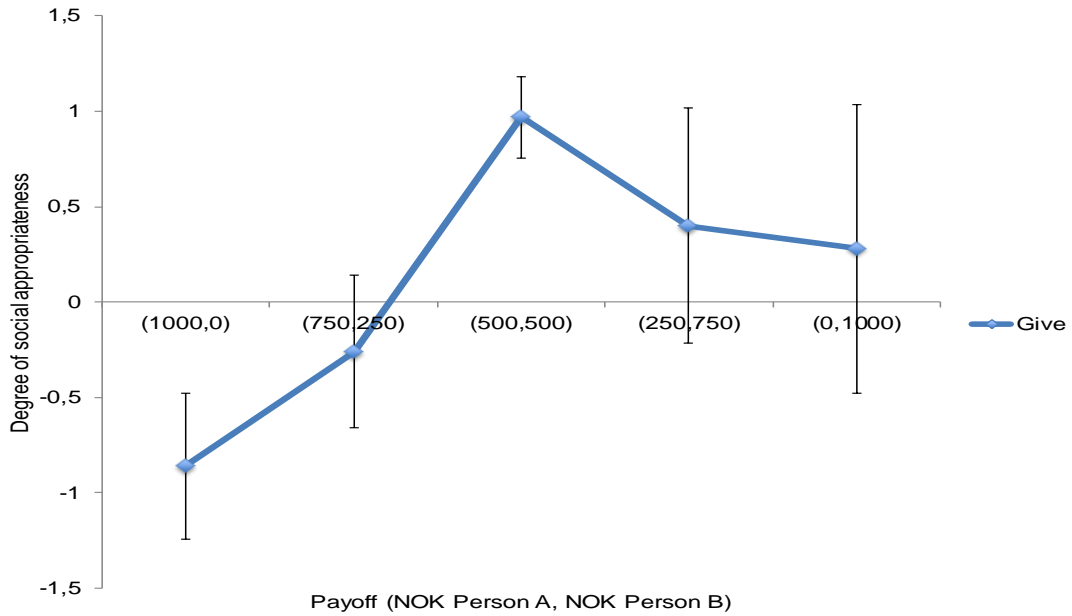
-Please do not talk to each other during the experiment.

-You will have four minutes to complete the questionnaire. We'll let you know when there is one minute left. If you should finish before the time is up, please be seated.

-If you have any questions, please raise your hand.

Now we will start handing out the papers. Please start.

Appendix F: Norm-profiles with standard deviations, between-subject design



Appendix G: Breusch-Pagan tests for heteroscedasticity and baseline regressions, between-subject design

Breusch-Pagan test for heteroscedasticity:

Treatment-condition	(1000,0) & (0,1000)			(750,250) & (250, 750)		
	Chi2(1)	p-value	n	Chi2(1)	p-value	n
Give	15.01	0.000	78	6.51	0.011	78
Take	19.61	0.000	77	2.62	0.11	78

Baseline regressions for the Breusch-Pagan test:

Treatment-condition "Give" vs. "Take" , between design				
Constant	Give 0	Give1000	R²	N
0.282*	-1,145***	(baseline)	0.469	78
(0.099)	(0.140)			
Constant	Give250	Give750	R²	N
0.404***	-0.668***	(baseline)	0.300	77
(0.084)	(0.118)			
Constant	Take1000	Take250	R²	N
0.402***	-1,299***	(baseline)	0.603	78
(0.085)	(0.121)			
Constant	Take750	Take250	R²	N
0.504***	-0,667**	(baseline)	0.387	78
(0.068)	(0.096)			

Appendix H: Breusch-Pagan baseline OLS-regression results, distributional-equivalent actions within a treatment-condition

The baseline regressions are of the type: $y = \alpha + \beta x + \varepsilon$, where the dependent variable (y) is the appropriateness ratings, x is the ratings of one of the payoff-equivalent actions, and the other action used as a baseline represented by α .

Treatmentcondition "Give"				
Distribution equivalent actions (0,1000) and (1000,0)				
Constant	Give0	Give1000 (baseline)	R ²	N
0.389*** (0.051)	-0.243*** (0.072)		0.554	239
Distribution equivalent actions (250,750) and (750,250)				
Constant	Give250	Give750 (baseline)	R ²	N
0.589*** (0.044)	-0.747*** (0.062)		0.378	238
Treatmentcondition "Take"				
Distribution equivalent actions (0,1000) and (1000,0)				
Constant	Take0	Take1000 (baseline)	R ²	N
-0.761*** (0.059)	1.111*** (0.083)		0.332	240
Distribution equivalent actions (250,750) and (750, 250)				
Constant	Take250	Take750 (baseline)	R ²	N
-0.083* (0.044)	0.683*** (0.063)		0.332	240
Treatmentcondition "Take, personal"				
Distribution equivalent actions (0,1000) and (1000,0)				
Constant	P-take0	P-take1000 (baseline)	R ²	N
-0.772*** (0.058)	1.072*** (0.082)		0.417	240
Distribution equivalent actions (250, 750) and (750, 250)				
Constant	P-take250	P-take750 (baseline)	R ²	N
-0.178*** (0.049)	0.683*** (0.069)		0.293	240

Appendix I: Breusch-Pagan baseline OLS-regression results of payoff-equivalent actions

Treatment-condition "Take" vs. "Take, personal"					
Payoff (1000, 0)	Constant -0.761*** (0.047)	P-take1000 -0.011 (0.067)	Take1000 (baseline)	R² 0.000	N 240
Payoff (750, 250)	Constant -0.083* (0.045)	P-take750 -0.094 (0.064)	Take750 (baseline)	R² 0.009	N 240
Payoff (500,500)	Constant 0.933*** (0.019)	P-take500 0.033 (0.026)	Take500 (baseline)	R² 0.002	N 240
Payoff (250,750)	Constant 0.6*** (0.048)	P-take250 -0.094 (0.068)	Take250 (baseline)	R² 0.008	N 240
Payoff (0,1000)	Constant 0.35*** (0.068)	P-take0 -0.05 (0.096)	Take0 (baseline)	R² 0.001	N 240